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BLUE JAY

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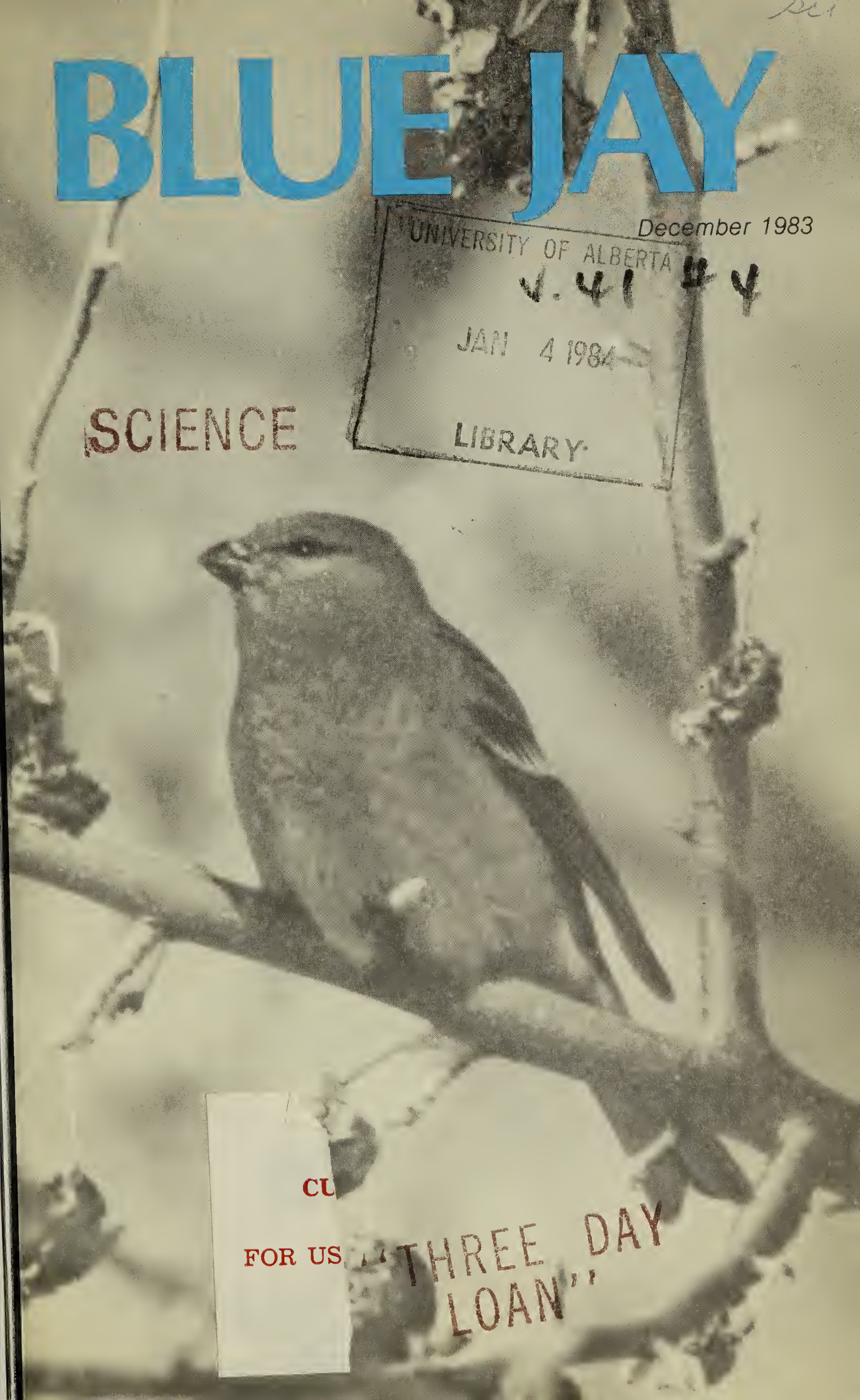

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JEAN AND JOHN HODGES

In a short nine months, Saskatchewan lost two very good friends who were active throughout their lives in many aspects of natural history: Eleanor *Jean* Hodges (August 1982) and John Victor Hodges (April 1983).

John was born in 1918 in Belfast, Ireland, and after the family immigrated to Saskatchewan a few months were spent on a farm after which they moved to Regina where John lived (with the exception of war service) to the end of his life.

Jean was born in 1920 at Mud Lake, near Kelliher, later moving to Canora where she attended public school before moving to Regina.

Both Jean and John attended Scott Collegiate where she was active in academic subjects and sports while John continued to pursue the scientific interests he had begun at Albert School. These included a fine butterfly collection which he obtained in various places including Government House and the Legislative flower beds; run ins with head gardeners resulted until they realized how serious this red headed boy was! At this time too he began collecting Indian artifacts and systematically cataloguing them. While at Scott, his interest in astronomy began to develop and he was instrumental in salvaging the observatory from Central Collegiate which remained in his possession. Also while in his teens, he was introduced by the pathologist then at the General Hospital to scientific laboratory work; thus began his concern for his fellow man which showed up continually in his later life.

Before the second world war, John joined the militia; he was a crack shot and Jean often joined him, both winning competitions in teams and as individuals. At the same time John was taking a machinist and mechanics course at Balfour Technical School which stood him in good stead when he enlisted in the RCAF. He spent most of his tour of duty as a Flight Sergeant gunnery instructor living in married quarters with Jean and their children, Gerry and Faye, some of the time. He was posted to Leeds, England, for the last nine months of the war. When he returned, he attended Regina College.

In common with many returned service men, John worked at a number of jobs including film making of hospital operating procedures for teaching purposes. He spent a number of years with the Workers' Compensation Board then moved to Canada Labour in the same vital field of safety in the work place.

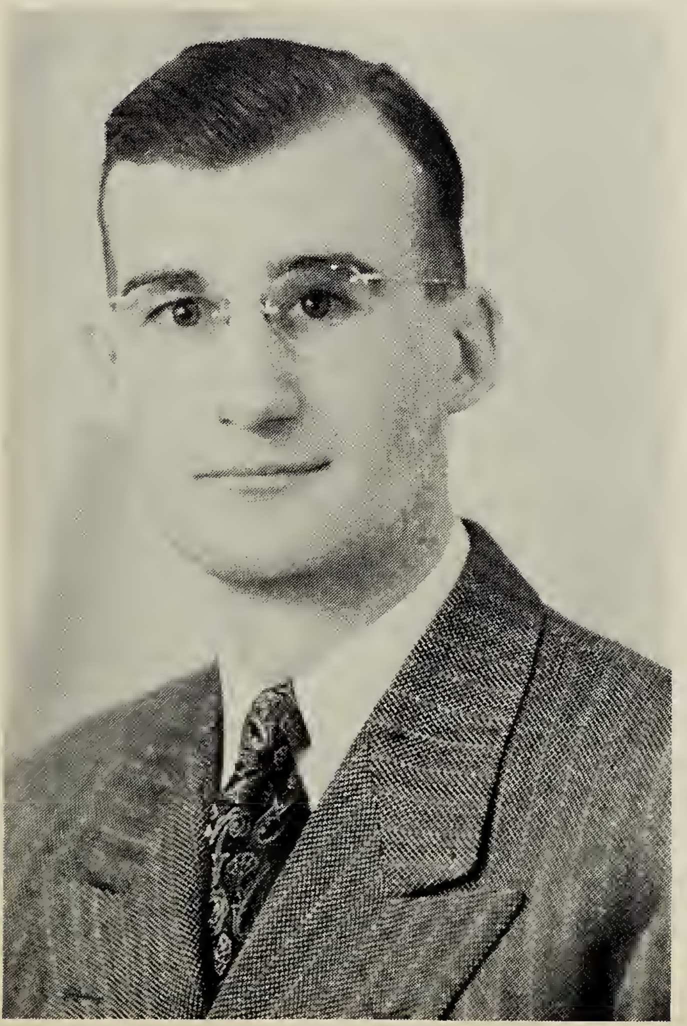
During the fifties, sixties and seventies, John and Jean continued to work as a team in organizations including Saskatchewan Natural History Society, Regina Natural History Society, Saskatchewan Archeological Society, Regina Archeological Society, Regina Astronomical Society and Regina Guild of Color Photography. In some cases they were founding members; always held office, attended meetings, lectured and participated wherever they were. Both lectured for Adult Education, New Horizons and Community College. John lectured to RCMP Police College, to University of Regina classes and as guest lecturer for other organizations, with Jean doing much of his research. Jean helped many Girl Guide members get their "star" badges and spent several years sharing the natural wonders of our province with students touring the Saskatchewan Museum of Natural History. Other activities of this unusual couple included membership in Masonic Lodge, Assiniboia No. 49 AF and AM by John and Jean's membership in Eastern Star, Excelsior Chapter. For many years, John was a member of the Associate Committee of Meteoritics, National Research Council of Canada; and was made an associate of Saskatchewan Safety Engineers. In 1951, John joined the St. John's Ambulance Association where he quickly advanced to be instructor of advanced first aid. Jean also participated as a first aid instructor in the early sixties including teaching industrial first aid in the field for the oil drilling industry. John was honored three times by the Order of St. John of Jerusalem twice being decorated by the Governor-General of Canada, Rt. Hon. George Vanier in Ottawa. Then a special investiture was held in the chapel of the Plains Health Centre on April 6, 1983. In the presence of his son, officers of the order and close friends, John was invested in the order of Commander-Brother by His Honour Irvin McIntosh, Lieutenant Governor of Saskatchewan. This is one of the highest honours attainable and must be approved by Her Majesty, Queen Elizabeth.

Although they were "amateur" archeologists, the Museum of Natural History asked John to conduct the Last Mountain House "dig" as director influenced no doubt by his work at other sites especially at Stoney Beach. Jean acted as one of his site supervisors for the five years the project continued and, hopefully, a report of this work will be published soon.

The basement of the Hodges' home was always a hive of activity with friends grinding mirrors for telescopes, transcribing the journal for the Hudson's Bay post at Last Mountain House, or reconstructing pottery shards into recognizable pots (Jean's speciality). Whether friends were developing films or recording facts which added to our knowledge of our province, there was always laughter and a feeling of achievement. In later years, award-winning photographs and Jean's water colors began to appear in the living room where so many meetings of societies had been held.

John and Jean's friends and acquaintances will remember them for their many interests and expertise in so many fields of knowledge. They will also remember John's ability to teach techniques of investigation and research and Jean's help and hospitality. I shall always remember their patience as they taught me to feed chickadees from the hand and the reward when a bird pauses on my fingers, seed in beak, and looks at me as if to say: thank you! A friend, *Elizabeth Parkin*, Regina.

EDWIN WILLIAM BROOMAN, 1914-1983



Edwin William Brooman was born at Prince Albert on 11 September 1914. He once told me that his interest in nature was "sparked" by Frank Lund, a Prince Albert taxidermist, and "fanned" by O. C. Furniss, one of his teachers. He began a collection of birds' eggs at age 10, as boys with outdoor interests often did in those years. Often on his boyhood rambles he was accompanied by Elmer L. Fox. He began keeping records in 1934.

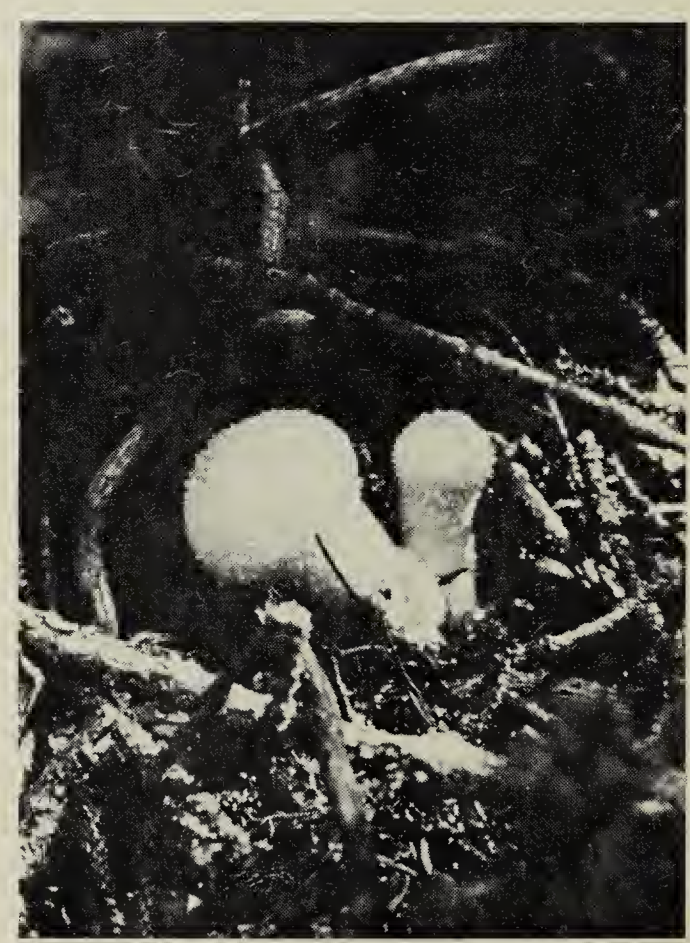
Ed graduated from the Saskatoon Normal School in 1938, obtained his B.A. from the University of Saskatchewan in 1947, and his M.Ed. from the University of Arizona during a one-year sabbatical in 1959. He was vice-principal at Queen Mary school, then principal of Prince Edward School in 1946 and of Prince Charles school from 1955 until his retirement in 1972. Although he took University courses in mammalogy, ornithology, entomology, plant taxonomy and mycology, he told me that most of his practical knowledge in these fields came from what he taught himself. Ed was an accurate, diligent observer. He paid special attention to mushrooms and flowering plants: in 1953, for example, he collected 700 sheets of plants, and in 1954 made microscope slides and colored plates of 30 species of mushrooms. A short paper on the mushrooms of Prince Albert appeared in the *Blue Jay* in 1957 (15:75-76), and a report of a school project of counting remaining birds' nests in winter in 40 city blocks appeared in 1954 (12:21). He contributed valuable bird observations to *Birds of the Saskatchewan River, Carlton to Cumberland*, published in 1959.

Ed took care to live where he could watch nature. He bought a home on River Street in 1942, and then in 1972 he moved to an acreage northwest of Prince Albert where he had a solarium and did projects on plant propagation and hybridization.

Ed, who was an active member of an earlier nature club in Prince Albert founded and was the first president of the Prince Albert Natural History Society (PANHS) established in 1954. He called the organizational meeting on 22 January, the first executive meeting on 22 February, and I was privileged to be the speaker at the first public meeting of the enthusiastic group on 12 March. Grace Crooks, Ian Collins, Bob Arnold, Ross Homer and M.A. Welsh were among the initial strong supporters, joined by Tony Capusten and others in later years. The society took on the ambitious but financially precarious project of bringing Audubon Screen Tours to Prince Albert in 1954-55 and for several winters thereafter, and this became the main focus of the society's activity. Ed served on the executive of the Saskatchewan Natural History Society from its founding for 13 consecutive years until the end of 1961, for 10 years as a provincial director and for the last 3 years as president of the PANHS.

He married Florence Burbidge in 1942. Their son, Glen, is studying business administration at Michigan State University at East Lansing. Ed's activities were sometimes hampered by ill-health and, for his last 2 years, by cancer. He died in hospital on 3 July 1983. His mushroom spore prints and his collection of birds' eggs are soon to be catalogued by Elmer L. Fox and transported to the Saskatchewan Museum of Natural History.

Most of the information above was gleaned from letters written by Ed in the 1950s, supplemented by information from Florence Brooman and Tony Capusten. — *C. Stuart Houston*, 863 University Drive, Saskatoon, Saskatchewan S7N 0J8.



J. B. Gollop

FIRST SASKATCHEWAN RECORD OF CHANNEL CATFISH

EDWARD L. DEAN, Saskatchewan Fisheries Laboratory, 30 Campus Drive,
Saskatoon, Saskatchewan. S7N 0X1

On 13 June 1983, a Channel Catfish *(Ictalurus punctatus)* was captured in the Qu'Appelle River, 5 km west of Tantallon (50°32' N; 101°50' W). The fish was captured on a pickerel bug by Larry Brown, an angler from Tantallon.

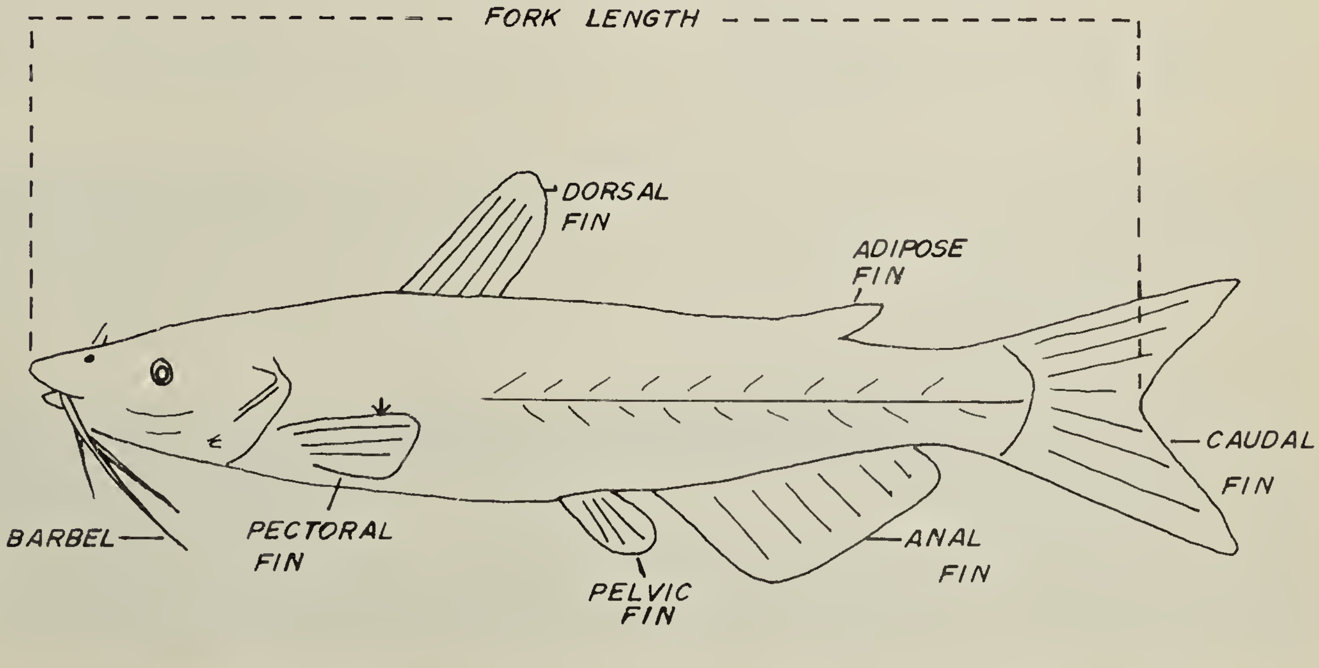
The specimen had a fork length of 68.3 cm (26.9 in) and weighed 5.6 kg(12.3 lb). The age was estimated at 15 yr.

Identification of the specimen was confirmed by F.M. Atton, formerly of the Saskatchewan Fisheries Laboratory, Saskatoon.

Morphological characteristics on which species identification was based are: deeply forked caudal fin; skin naked of scales; adipose fin conspicuous, short, fleshy and free; barbels at corner of mouth more than three times as long as those near nostrils (Fig. 1); strong sharp spines (one at the front of the dorsal and each of the pectoral fins, (Fig. 2).[5]

This species is caught by commercial fishermen in Lake Erie and Lake St. Clair and provides sport for many anglers. The white flaky flesh is highly regarded by many fishermen. It is the largest of the catfishes occurring in Canada. The world record is 26 kg, caught in South Carolina. The largest reported from Canada is 17 kg from Georgian Bay, Lake Huron. While fish of 5 kg are not uncommon, sizes of 1-2 kg are average for inland waters.[4]

Carlander reports the occurrence of this species in Montana, southern Manitoba to southern Quebec, and west of the Appalachians, to Florida and Mexico.[2]



Anatomical features of the Channel Catfish. Arrow indicates first spine of pectoral fin.

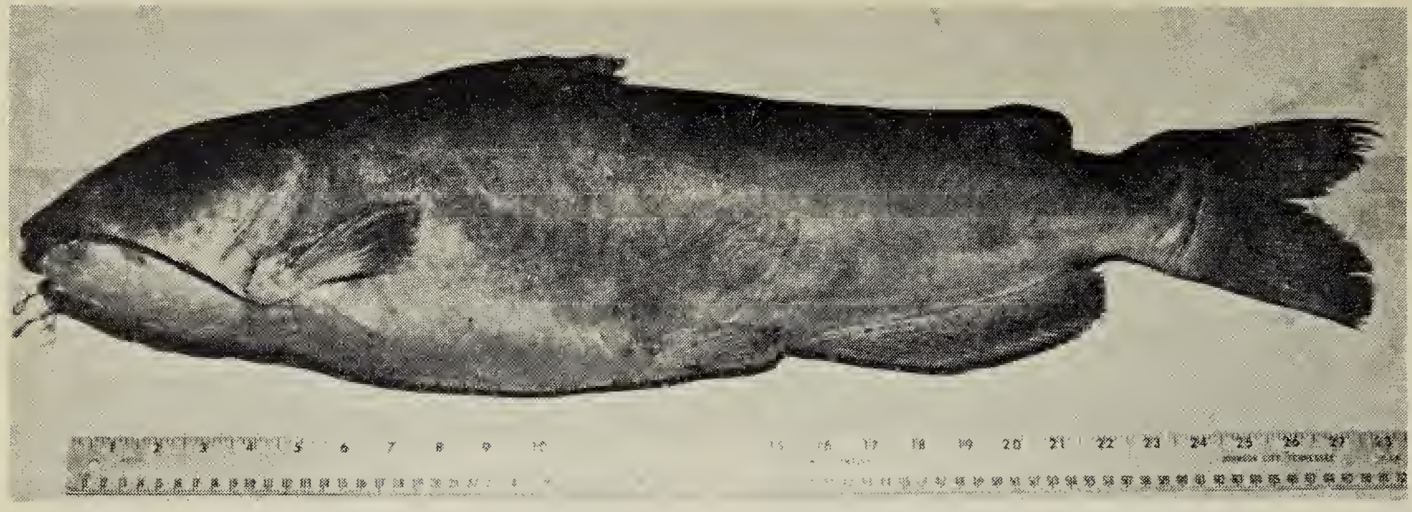


Figure 1. *Channel Catfish captured in the Qu'Appelle River near Tantallon.*

Willock mentions two previous records of channel catfish in Saskatchewan: Stegner's and Richardson's.[7] [6] [3] Both records are unusual and have been questioned in the past.[5] [7]

In *Wolf Willow,* a historical account of the last plains frontier (Montana-Saskatchewan), Stegner wrote of "a spent catfish washed in from the Swift Current or some other part of the watershed in the spring flood". The specimen was "two feet long, his whiskers hung down, his fins and tail were limp — a kind of fish no one had seen in the Whitemud". Of the three species of catfish known to exist in the Missouri drainage in Montana, only the Channel Catfish attains a length of two feet.[1] The Whitemud (Frenchman) is part of the Missouri drainage.[7]

In *Fauna boreali — Americana*, Richardson gives the location for a specimen described as a Channel Catfish as "Pine-Island Lake, Latitude 54° N" (now Cumberland Lake, Saskatchewan).[3] According to Richardson, "the length of the specimen, excluding the caudal, was 30 inches".

[1] BROWN, C. J. D. 1971. Fishes of Montana. Big Sky Books, Montana State Univ., Bozeman, Montana. 207 p.

[2] CARLANDER, K. D. 1969. Handbook of freshwater fishery biology, Volume 1. Iowa State University Press, Ames, Iowa. 752 p.

[3] RICHARDSON, J. 1836. Fauna boreali — Americana. John Murray, London. 327 p.

[4] SCOTT, W. B. 1967. Freshwater fishes of Eastern Canada. Ed. II. University of Toronto Press. 137 p.

[5] SCOTT, W. B. and E. J. CROSSMAN. 1973. Freshwater fishes of Canada. Bulletin 184. Fisheries Research Board of Canada, Ottawa. 966 p.

[6] STEGNER, W. 1955. Wolf willow. 1973 Comstock Edition, Viking Press Inc., New York, N.Y. 310 p.

[7] WILLOCK, T. A. 1969. Distributional list of fishes in the Missouri Drainage of Canada. J. Fish. Res. Bd. Can. 26(6): 1439-1449.

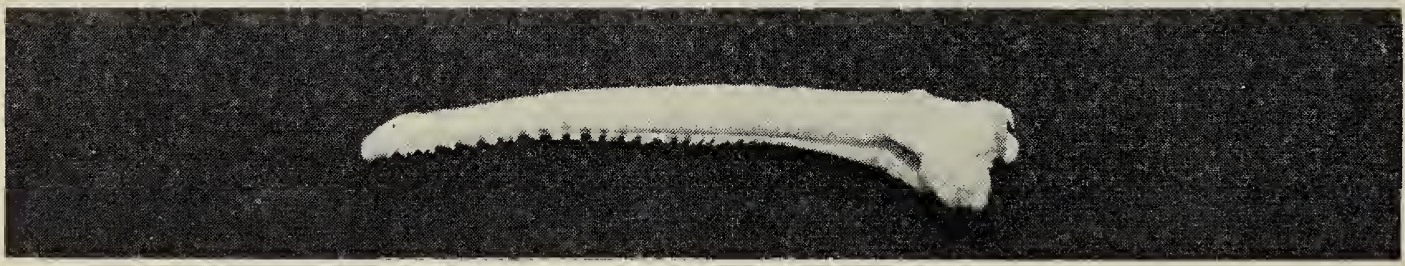


Figure 2. *Anterior spine of pectoral fin taken from Channel Catfish.*

NORTHERN REDBELLY SNAKE AT ANTLER

DALE HJERTAAS, 919 Cook Crescent, Regina, Saskatchewan. S4X 2L9

My unexpected reward for attending Thanksgiving dinner at Mom and Dad's was a modest range extension for the Northern Redbelly Snake (formerly Northern Red-bellied Snake). My uncle, Val Stuckey, described a small snake with a red belly which the Pioneer elevator agent at Antler had caught and was keeping in a jar.

On October 11, 1983 I telephoned the elevator agent, Mr. Donald Renet. He reported catching the snake on Tuesday, October 4, near the rail line beside his elevator. C.P. Rail were rebuilding the line at this time. Thus this secretive snake, which is most often found under rocks or logs, could have been disturbed by construction and so been found.

Mr. Renet described the snake as 8-9 inches long, about pencil size in diameter, brown above, with a dark orange belly (Val Stuckey described it as orange-red). This fits the description of the Northern Redbelly Snake, *Storeria occipitomaculata,* which is the only Saskatchewan snake with a red belly.[1] [2] Identification thus appears certain even though the specimen was released where it was found on October 7, and no photographs were taken.

The Northern Redbelly Snake has previously been reported in Saskatchewan in and near the eastern Qu'Appelle Valley at Crooked Lake, Grenfell, Hazel Cliffe, and Langenburg. Preston shows it extending across southern Manitoba except for the southwest corner, including the area adjacent to Antler.[2] This specimen thus represents a modest southward range extension and Saskatchewan's first record outside the Qu'Appelle drainage.

[1] COOK, FRANCIS R. 1966. A guide to the Amphibians and Reptiles of Saskatchewan. Saskatchewan Museum of Natural History, Regina. 40 pp.

[2] PRESTON, WILLIAM B. 1982. The Amphibians and Reptiles of Manitoba. Manitoba Museum of Man and Nature, Winnipeg, Manitoba. 128 pp.

Lawrence Baschak

BIRDS — NEW NAMES, NEW ORDER

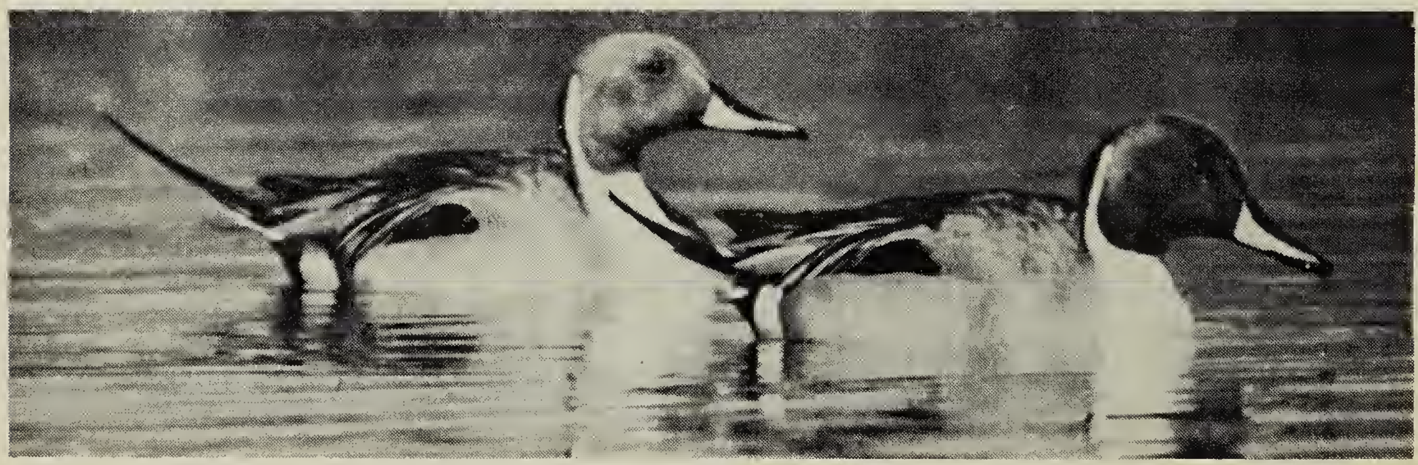
BERNARD GOLLOP, Canadian Wildlife Service, 115 Perimeter Road,
Saskatoon, Saskatchewan. S7N 0X4

Anyone who has seen the 1983 checklist of Saskatchewan birds will notice significant differences from the 1969 checklist, as well as from other lists, field guides and reference books in print prior to September 1983.[6 9] The 1983 list incorporates the new names and new sequence of names proclaimed by the American Ornithologists' Union (AOU) in 1982.[3] The AOU is an international association of (mostly) professional ornithologists. It is usually accepted as the final authority on scientific and English names and the order in which these appear in such books as the Birds of Canada, The Birds of Alberta, Birder's Guide to Churchill, etc. This order is theoretically evolutionary, the oldest forms coming first, the most recently evolved last.

First, the new names: The following 41 name changes include those of most interest to anyone birding in the Prairie Provinces and Northwest Territories. Shown also is the confusion added by the use in the latest edition of Peterson's guide of some old, some new and some of Peterson's own names.[8] (Table 1.)

The major reason for change is to come up with a uniform system of English names worldwide.[7] To date the same species has been known by different English names in different countries and the same English name has referred to different species in various countries. The addition of adjectives such as "American" separates, for instance, "our" Black Duck from the Black Duck of Africa.[7]

These changes are in addition to those promulgated by the same organization some 10 years ago which resulted in one species name encompassing what had once been considered separate species but had since been found to be only subspecies, e.g., Common Flicker and Yellow-rumped Warbler.[2] Included was Dark-eyed Junco for the Slate-colored and Oregon Juncos. Unfortunately, Peterson has seen fit to substitute Northern for Dark-eyed.[8] On the other hand, the AOU has now changed Common Flicker to Northern Flicker. The July 1982 AOU list retained Common Raven but a more recent paper states that the new name is now Northern Raven.[5] However the published volume stays



Northern Pintail. *Fred Lahrman*

Table 1. AOU NAME CHANGES AND PETERSON'S FIELD GUIDE NAMES

Previous AOU	*Peterson 1980*		*New AOU*
White Pelican	P*		American White Pelican
Louisiana Heron	P		Tricolored Heron
Green Heron	P		Green-backed Heron
Black-crowned Night Heron	P		Black-crowned Night-Heron
Yellow-crowned Night Heron	P		Yellow-crowned Night-Heron
Whistling Swan	P		Tundra Swan
White-fronted Goose	P		Greater White-fronted Goose
American Green-winged Teal		P	Green-winged Teal
Black Duck		P	American Black Duck
Pintail	Common Pintail		Northern Pintail
European Wigeon		P	Eurasian Wigeon
Goshawk		P	Northern Goshawk
Marsh Hawk	P	P	Northern Harrier
Greater Prairie Chicken	P		Greater Prairie-Chicken
Turkey		P	Wild Turkey
Common Gallinule	P		Common Moorhen
American Golden Plover	Lesser Golden Plover		Lesser Golden-Plover
Northern Phalarope	P		Red-necked Phalarope
Black-headed Gull	P		Common Black-headed Gull
Barn Owl	P		Common Barn Owl
Screech Owl	Common Screech Owl		Western Screech-Owl
Hawk Owl	P		Northern Hawk-Owl
Pygmy Owl	(Not included)		Northern Pygmy-Owl
Saw-whet Owl	P		Northern Saw-whet Owl
Poor-will	P		Common Poorwill
Northern Three-toed Woodpecker	P		Three-toed Woodpecker
Black-backed Three-toed Woodpecker	P		Black-backed Woodpecker
Common Flicker	P		Northern Flicker
Eastern Wood Pewee	Eastern Pewee		Eastern Wood-Pewee
Western Wood Pewee	(Not included)		Western Wood-Pewee
Rough-winged Swallow	P		Northern Rough-winged Swallow
Common Crow	P	P	American Crow
Long-billed Marsh Wren	P	P	Marsh Wren
Short-billed Marsh Wren	P	P	Sedge Wren
Dipper	(Not included)		American Dipper
Wheatear		P	Northern Wheatear
Mockingbird		P	Northern Mockingbird
Starling		P	European Starling
Cardinal		P	Northern Cardinal
Gray-crowned Rosy Finch	(Not included)		Rosy Finch
Tree Sparrow		P	American Tree Sparrow

* P to the left indicates that Peterson uses old name; P to the right that he uses new name.

with Common Raven (Scott Wood, Carnegie Museum, pers. comm.)

The two most ridiculous changes are the new Three-toed Woodpecker and Marsh Wren. Because the old names will linger on, if someone now announces that she saw a marsh wren, her audience cannot be sure whether it was a Sedge or a Marsh Wren. And if three-toed woodpecker appears in a publication that does not capitalize bird names, the species referred to will remain uncertain in perpetuity. Also the red-necked phalarope, if not capitalized, could refer to Wilson's Phalarope or Red Phalarope.

Now, about the new order: The sequence of families remains the same from loons through upland game birds, although here and later in the list some families have been combined and others divided. (Saskatchewan's 52 families in 1969 have become 44.) Cranes now follow rails and coots, and avocets are inserted between plovers and the rest of our shorebirds. Dipper follows wrens, while kinglets and thrushes (now the same family) precede thrashers. Near the end is the largest family, formerly most of four families, followed by a family that includes Pine and Evening Grosbeaks (but not Rose-breasted or Black-headed), redpolls, goldfinches and crossbills. The last species in the new order? The House Sparrow in its own family.

And, if the reordering of families is not frustrating enough, it appears that most species within most families have been shifted around so that bird-watchers will spend more time looking for a species in the checklist than in its habitat. Just a few examples from the largest family: Black-and-white is no longer first on our warbler list; it is buried about 2/3 of the way through warblers. And don't look for the redstart to be the last warbler any more. You will also find that the blackbird-meadowlark tribe *follows* sparrows, longspurs and Snow Bunting. Ornery, inexplicable and unjustifiable as such changes may seem, they are usually based on new information on species relationships determined from anatomical, biochemical and behavioral studies conducted since the previous checklist of 1957.[4] [1]

Anyone wishing a list of Prairie Province birds with their official English names and new order can obtain one by writing the author.

Good bird-naming!

[1] AMERICAN ORNITHOLOGISTS' UNION. 1957. Check-list of North American birds. Port City Press, Baltimore.

[2] AMERICAN ORNITHOLOGISTS' UNION. 1973. Thirty-second supplement to the American Ornithologists' Union check-list of North American birds. Auk 90:411-419.

[3] AMERICAN ORNITHOLOGISTS' UNION. 1982. Thirty-fourth supplement to the American Ornithologists' Union check-list of North American birds. Auk 99(3): Supplement.

[4] DEBENEDICTUS, PAUL. 1982. Gleanings from the technical literature. Birding 14:192-194, 216-218.

[5] DEBENEDICTUS, P. A. 1983. Coming! A new official checklist of North American birds — A revolution in Avian nomenclature. American Birds 37:3-8.

[6] KREBA, ROBERT. 1983. Field checklist of Saskatchewan birds. Museum of Natural History, Regina.

[7] PARKES, K. C. 1983. The more things change . . . Living Bird Quarterly 2(3): 14-17.

[8] PETERSON, R. T. 1980. A field guide to the birds east of the Rockies. Houghton Mifflin, Boston.

[9] SASKATCHEWAN MUSEUM OF NATURAL HISTORY. 1969. Field check-list of Saskatchewan birds. Sask. Dept. of Culture and Youth, Regina.

SABINE'S GULLS AT TURTLE LAKE, SASKATCHEWAN

RON JENSEN, 1027 King Crescent, Saskatoon, Saskatchewan. S7K 0N9.

To make preparations for the annual summer meeting, Stan Shadick and I joined Gary and Muriel Carlson at Turtle Lake for the June 4th weekend. Turtle Lake is a resort area about 100 km northwest of The Battlefords on the southern edge of the boreal forest.

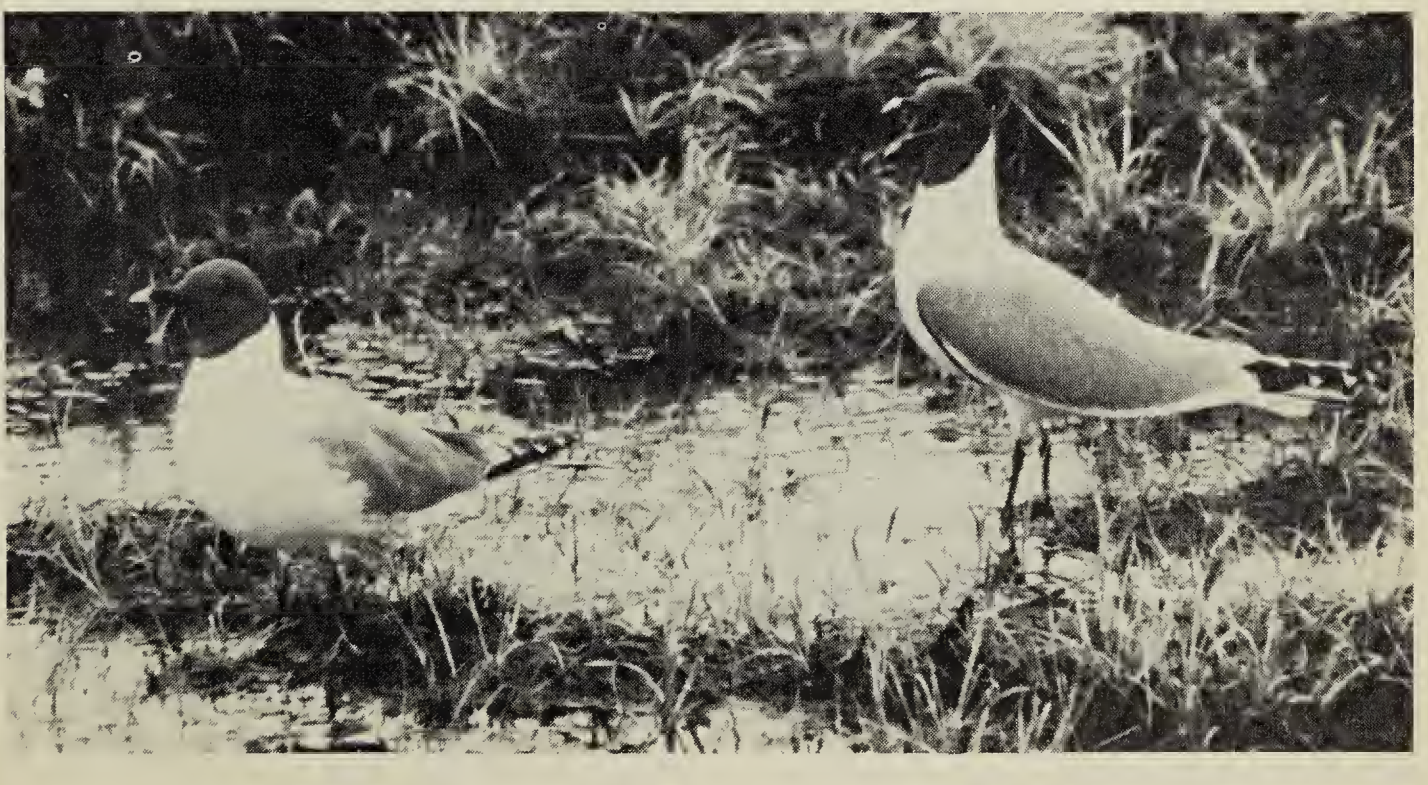
Saturday we started early, looking for warblers, and spent the rest of the day visiting possible tour sites for the annual meeting. On a boat trip that evening to view the heronry and an osprey nest, we watched gulls rise in flight before the boat to alight in its wake. It was quite easy to identify the Bonaparte's and Franklin's Gulls by their distinctive wing patterns. Stan pointed out one gull with black outer primaries and distinctly forked white tail. Our combined resolve was a Sabine's Gull. It was, however, on our return trip to the Carlson's cabin that we found six Sabine's Gulls feeding in a loose flock of Bonaparte's and Franklin's. Stan, Muriel and myself watched the gulls for 15 minutes concluding that these were Sabine's Gulls. This was a satisfying close to an enjoyable day, adding a new species to the list for the Turtle Lake area.

Sabine's Gull sightings for the three prairie provinces are considered rare by Godfrey.[1] There are at least six articles of detailed sightings from southern Alberta, and Manitoba and Saskatchewan published in the Blue Jay from as early as 1914.[2]

Although not a new bird for the prairies, the Sabine's Gull is not a yearly visitor — a pleasant reward for a birder's efforts.

[1] GODFREY, W. E. 1966. The Birds of Canada. Nat. Mus. Can. Bull. 203.

[2] COPLAND, H. W. R. 1969. A Sabine's Gull in southern Saskatchewan. Blue Jay 28:146-147.



Sabine's Gulls, Cambridge Bay, N.W.T. *Stan Shadick*

AVIAN HIGHLIGHTS FROM DUCK MOUNTAIN PROVINCIAL PARK, SASKATCHEWAN — 1981

DONALD A. WEIDL, Box 607, Birch Hills, Saskatchewan. S0J 0G0

While employed by the Park Development Branch of the Department of Tourism and Renewable Resources, the author was involved in a resource inventory of the flora and fauna of Duck Mountain Provincial Park. David R. M. Hatch and Associates was hired by the Park Development Branch to work with the author. Besides the author and David Hatch, field workers included Kelvin Krieger and Louis L'Arrivee from Winnipeg. The actual field work commenced in May and terminated in November of 1981.

During the study, 170 species of birds were recorded within the park and an additional 3 species were seen within a few kilometers of the park. An additional 11 species have been documented in the park by Robert Long (July and August 1970) and Bob Luterbach (July 1973). For the purpose of the 1981 inventory the 170 species recorded within the park were broken down into 5 categories: summer residents (123 species of which 50 were recorded breeding), summer visitors (10), year-round residents (15), winter visitors (8), and transients (14). Combined, these reports give a total of 181 species of birds recorded within the park and an additional three found in the immediate vicinity.

An attempt was made to gather as many bird observations as possible for all areas of the park. Observations were made while travelling the network of roads and trails and from ground checks made in all habitat types. The initial report gives the status of each species identified according to criteria similar to that used in Margaret Belcher's *Birds of Regina*.[2] For some species not enough data was gathered to determine the bird's status in the park. Regular surveys were made throughout the park from 1 June to 11 September 1981, and intermittently over the next 2 months. Surveys were conducted at various times of day. Usually surveys started in mid-morning and ended before noon and in the evenings from 1800 to 2100. During June additional counts were made during early morning, 0330 to 0600, and during the night, 2100 to 2400. An aerial survey of the park was also made 17 June.

The following is a summary of 20 of the more interesting bird species recorded during the study. Three other lists of birds of the Madge Lake area (one of highlights and two complete) have been published for the periods, 6 May - 19 June 1926, 15 May - 22 June 1951, and 9, 10 June 1956.[1] [3] The absence of many of the following species in these earlier surveys is noted.

WHITE PELICAN. Fairly common summer visitor. Groups of 50,10 & 30 were observed on Ketchamonia Lake and 15 on a small lake immediately east of the Manitoba-Saskatchewan border during the aerial survey 17 June. Twenty were seen on Batka Lake on 19 June. A flock of 50 was seen on Bear Head Lake on 9 July and 12 August. A group of 11 was observed on Bear Head Lake on 10 September. Pelicans were not recorded on previous lists. (photo)

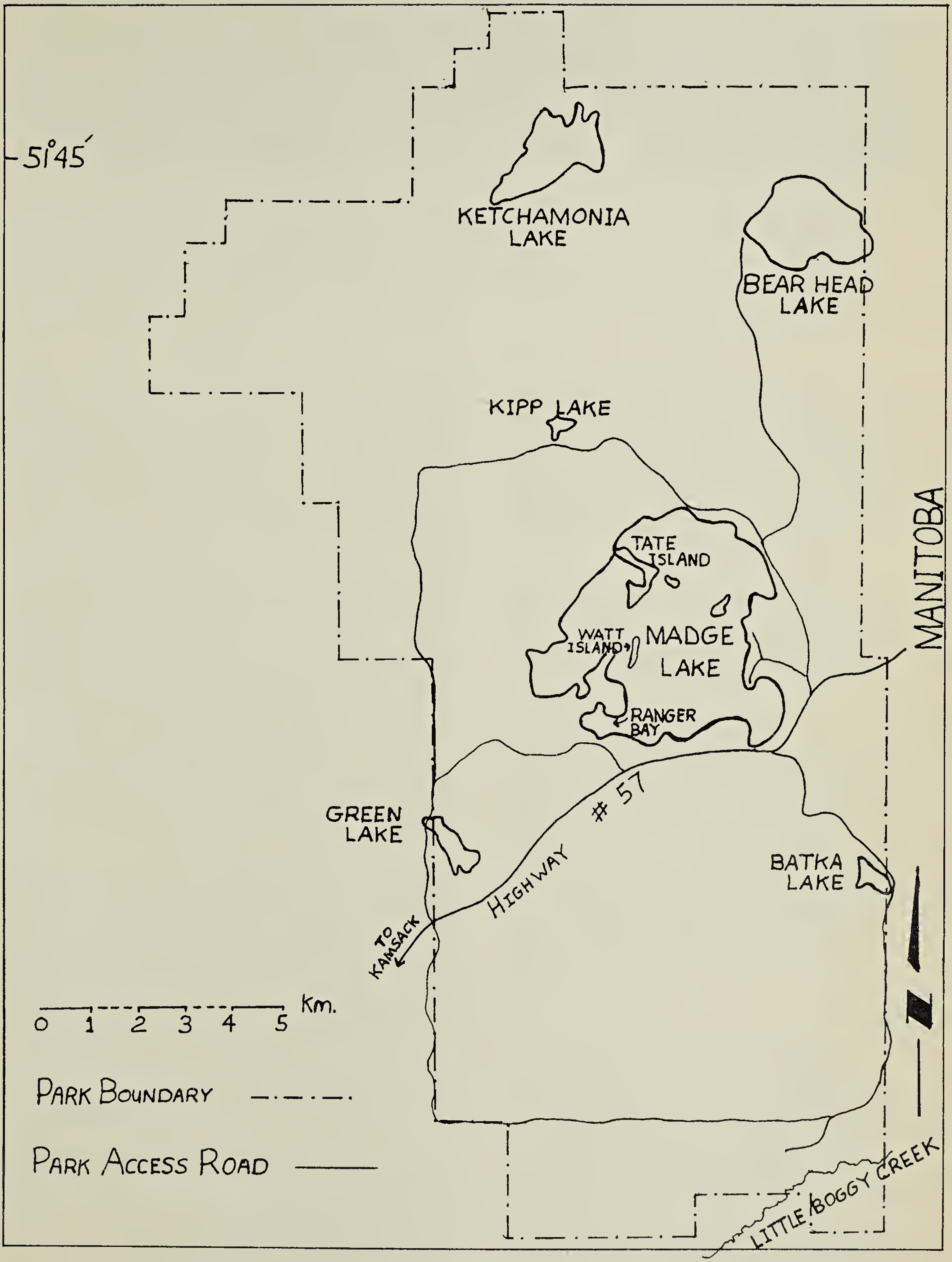


Figure 1 — *Map of Duck Mountain Provincial Park showing the park boundary, access roads and major water bodies.*

American White Pelican. *Larry Morgotch*

DOUBLE-CRESTED CORMORANT. Uncommon summer visitor. Approximately 40 were observed resting in dead trees on a small island at Ketchamonia Lake during the aerial survey 17 June. A thorough survey revealed no evidence of breeding. Not on previous lists. (photo)

GREAT EGRET. Very rare transient. A single bird was observed at the north end of Ketchamonia Lake during the aerial survey 17 June. Not on earlier lists.

GREAT BLUE HERON. Common summer resident. An established colony is located on Watt Island at Madge Lake. Approximately 22 nests containing young were counted on the island by Herb Copland during the 1981 breeding season. Adults can regularly be seen over Madge Lake flying to and from Watt Island during June and July. Single birds were also seen at Little Boggy Creek and along highway 57. One was heard at Little Boggy Creek 8 September.

WHITE-WINGED SCOTER. Uncommon summer resident. A successful nester at Green Lake. Three pair were observed on Green Lake on several visits during June. A female with a gang brood of 21 ducklings was observed on Green Lake 12 August.

TURKEY VULTURE. Common summer resident. Adults can be seen regularly at the garbage dump and over Little Boggy Creek. Twenty adults were seen sunning themselves on the fence surrounding the garbage dump 13 August. Adults were also seen over Madge Lake's Pelly Point and Tate Island. Three adults and 3 immatures were seen at the garbage dump 8 September. Thirteen adults with 4 immatures were seen at the garbage dump 9 September. (photo)

BALD EAGLE. Rare summer visitor and uncommon transient. Formerly believed to have nested on one of the islands at Madge Lake. No active or old nests were spotted within the park during the aerial survey. One adult was observed soaring over the northwest end of Maple Lake and later landed in a spruce tree on Roy Island 16 July. An adult and an immature were observed over Madge Lake 5 November. Not noted on 1956 list.

OSPREY. Rare summer visitor, but too few records to determine status accurately. Nests in Manitoba's Duck Mountain Provincial Park. An adult with a fish in its talons was seen over the southeast corner of Duck Mountain Provincial Park, Saskatchewan 17 June. An adult was seen over Ranger Bay 9 September. It is interesting to note that Bonaparte's Gulls were harassing both of the birds sighted. Not on 1956 list.

BONAPARTE'S GULL. Uncommon summer resident, fairly common transient. A pair was nesting in a black spruce tree at the southeast corner of the park 17 June. One adult was observed over Madge Lake 18 June. Four were seen chasing an Osprey over Ranger Bay and approximately 10 were seen over the core area 9 September. Ten immature birds were seen over Bear

Head Lake 10 September. Not considered breeding in 1951. (photo)

SCREECH OWL. Possible uncommon year-round resident. One was heard calling early in the morning from an aspen-white spruce stand near Batka Lake 3 June. Only record during the study and therefore the status of this species is open to question. Not on other lists.

PILEATED WOODPECKER. Uncommon year-round resident. One was heard and seen along the west park boundary, south of highway 57, 2 June. Individuals were also heard at Jubilee Subdivision, 4 June and at Little Boggy Creek 16 June. One was seen in a black spruce area at Jubilee Cottage Subdivision, 5 November. (photo)

WHITE-BREASTED NUTHATCH. Fairly common summer resident and possibly permanent resident. A pair was found nesting in an aspen tree along the Whitethroat Nature Trail on 15 June. One was heard and seen near the bicycle trail 15 July. Two adults and one immature were observed near Kipp Lake 12 August. Individuals were also reported at Batka Lake, along the Red Squirrel Nature Trail and near the south park boundary road. One was seen near the ball diamond area 5 November. Not noted on previous lists 1926 and 1951.

BROWN CREEPER. Uncommon summer resident. One was observed along the Whitethroat Nature Trail 4 June. A nest was found in a dead balsam fir along the Pelly Point Trail 24 June. One was seen along Pelly Point Trail 15 July. One was observed in a white spruce stand along the Red Squirrel Nature Trail 14 August. One was seen in aspen trees near Batka Lake 9 September and one observed south of the core area 1 October. Not recorded on earlier surveys.

WINTER WREN. Rare summer resident. A family group of four was seen and heard among deadfall along the road to Bear Head Lake 25 June. Not in earlier reports.

SOLITARY VIREO. Uncommon summer resident. One pair was observed building a nest in a birch tree along the Pelly Point Nature Trail 24 June. A pair was observed in birch trees along the Red Squirrel Nature Trail 25 June.

CONNECTICUT WARBLER. Probable summer resident. Singles were seen along the Whitethroat Nature Trail 4 June and along the Pelly Point Nature Trail 20 July. Reported in 1926 but not in 1951; noted with question mark in 1956.

CANADA WARBLER. Uncommon summer resident. Two were heard and seen at different locations near Kipp Lake 3 June. One was heard and seen along the Pelly Point Nature Trail 23 and 24 June. One male was heard and seen along the road to Bear Head Lake 12 August. Reported only on the 1951 list.

INDIGO BUNTING. Rare summer resident. A male was heard and seen near the entrance road to the Jubilee Cottage Subdivision 4 June. Two males were seen along a trail near Little Boggy Creek 16 June. Not in earlier reports.

LARK SPARROW. Rare summer resident. One was heard and seen in a grassy area near Little Boggy Creek 18 June. One was seen near Little Boggy Creek 8 September. Not reported earlier.

SWAMP SPARROW. Fairly common summer resident. Heard and seen near Batka Lake, along the east park boundary, Spruce Island and Bear Head Lake during June. One was heard near Little Boggy Creek 17 July. One was observed at the east side of Batka Lake 9, 10 and 11 September. A single was seen near Bear Head Lake 10 September.

[1] ANONYMOUS. 1956. Birds of Madge Lake. Blue Jay 14:53-54.

[2] BELCHER, MARGARET. 1980. Birds of Regina. Sask. Nat. Hist. Soc. Special Publ. 12.

[3] SASKATCHEWAN NATURAL HISTORY SOCIETY. 1956. List of birds recorded at Madge Lake, June 9, 10, 1956. Blue Jay 14:103.

BIRDS AND BIRDERS AT CRANE LAKE, SASKATCHEWAN

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Few people driving along Number One Highway between Tompkins and Maple Creek have any concept of the birder's paradise that once existed nearby when Crane Lake covered over 11,000 acres (4,450 ha).[12] To remind one of the early history, a plaque commemorates the "76 ranch" on a slight rise immediately south of what was the Crane Lake railway station for 20 years after the arrival of the Canadian Pacific Railway in 1883.

Three years before the Canadian Pacific came through, John Macoun visited Crane Lake.[9] [11] He left Fort Walsh on 15 August, went to English's Ranch 21 mi (34 km) west of Fort Walsh on 17 August, then northeast to Bitter Lake. Travelling east, he had difficulty in crossing Bear Creek but then was delighted by the sight of "a beautiful lake, glistening in the sun." (Bear Creek is now defined as entering Piapot Creek about 5 mi (8 km) south of Crane Lake; it continues as Piapot Creek to the lake. In the 1800s, however, Bear Creek was the name of the stream flowing into Crane Lake). He was disappointed in the hope of finding water for men and horses alike, for "our beautiful lake was liquid mud, with scarcely an inch of water on the surface."[9] This was almost certainly Crane Lake and here he collected five species of gulls. He then went northwest to "Big Stake Lake," no doubt Bigstick Lake, before heading for Humboldt where he joined the Carlton trail.[9]

The first naturalist to stop off at Crane Lake station itself was Walter Raine, a guest at the adjacent ranch headquarters from 2 through 6 June 1893.[13] Raine had been invited there while a guest at the sister ranch at Rush Lake, where he had also stayed for 6 days in 1891.[8] The two large ranches were part of a chain of 10 ranches, 6 in Saskatchewan and 4 in Alberta, founded by Sir John Lyster-Kaye's Canadian Agricultural, Coal and Colonization Company in 1887.[1] [6] [14] The name "76" is derived from the branch which came with the cattle purchased by Lyster-Kaye from the Powder River ranch in Alberta. The 76 ranch, occupying 23,000 acres (9300 ha) was 7 miles wide and was bounded on the north by Crane Lake, nestled into the southern edge of the Great Sand Hills. The south shore of the lake was 2.5 miles (4 km) north of the railway.[12]

The ranch manager then was D. H. Andrews. One of Raine's favourite birding spots, just east of the ranch buildings, is now named Andrews Lake. A few hundred yards farther east was Skull Creek, with a wooded valley which enticed Raine to make several short excursions southward along it. Only on Sunday was it possible for a cowboy named Palmer to take time off from other duties and escort Raine to Crane Lake. It was one of Raine's most memorable trips. First the buckboard became mired in waist-deep water in the attempt to cross Bear (Piapot) Creek, south of where it entered Crane Lake. The horse narrowly escaped drowning and the buckboard could not be freed for several days. The two men carried the canoe the rest of the way on their shoulders. On reaching Crane Lake, they paddled over to the first island, white with non-breeding pelicans; there they found the *nest of a Canada Goose*. When they had waded

Canada Goose Nest. *Stan Shadick*

to a second island, a storm came up. They hurriedly waded through 3-foot (1-m) waves, which splashed over their shoulders, to the first island where they took refuge under the canoe just as large hail stones began to fall. As the lake rose with the rain and heavy winds, part of the island was inundated, and they had to drag their canoe shelter to the center of the island; even here they were only one foot (30 cm) above the water level. Their lunch was ruined and inedible, they were drenched to the skin and miserably cold, and the inky black sky was relieved only by sheets of lightning. As Raine wrote later, "This was one of the dark sides of egg collecting" and offered a moral: "Boys, never go bird-nesting on Sunday."[13]

John Macoun returned to Crane Lake in 1894 with William Spreadborough and made an "immense collection" of eggs of 64 bird species between 8 and 22 June.[10] D. H. Andrews from the 76 ranch accompanied Macoun and Spreadborough to Crane Lake. They waded to an island "where we found a wonderful collection of water fowl and took a large quantity of eggs . . . Crane Lake had a greater bird life than any other part where I had been before in Canada."[11]

In 1905 Crane Lake was visited by Arthur Cleveland Bent of Taunton, Massachusetts, Chester S. Day of Boston, and Reverend Herbert K. Job of Kent, Connecticut. Bent arrived at Maple Creek on 29 May, several days after the others. Bent left on 17 June and Job one week later. They explored the north edge of the Cypress Hills, 20 mi (32 km) to the south of the Maple Creek; Hay Lake, a few mi to the east; Bigstick Lake, 26 mi (42 km) to the north; and Crane Lake, 16 mi (26 km) to the east. They made 5 visits to Crane Lake, on 2, 7-8, 13, 15 and 17 June.

Bent reported: "The most interesting locality of all was the duck island in Crane Lake and its surrounding sloughs at the mouth of Bear Creek, where the waterfowl were breeding in such great profusion and in such a limited area, less than one square mile, as to make it the crowning glory of the whole region.'' Bent noted that "in all 35 species of birds, mostly water-fowl and shore-birds, . . . either breeding or probably preparing to breed within this limited area . . .'' In two hours of dragging a rope on the island on 17 June 1905, Bent and Job flushed 61 ducks of 8 species, including 23 Gadwalls, from their nests, and estimated that "at least 150 pairs of ducks were breeding or were preparing to breed on this one island.''[2] They also saw several Common Mergansers, a White-winged Scoter and one Cinnamon Teal on the island, where on 2 June there had been 2 nests of the Canada Goose. A colony of *Common Terns* nested at the tip of the island and a pair of Crows had a nest in "the only tree,'' a small willow, one of the few pairs of crows seen during the entire trip. A pair of Short-eared Owls had a nest with one egg and 9 young. Marbled Godwits, Wilson's Phalaropes, Spotted Sandpipers and Savannah Sparrows also were breeding on the island. This island measured "about 300 or 400 yards in length by about 100 yards in width'' with several small ponds near the center. In the marsh nearby were a number of *Eared Grebe* nests and a fair-sized colony of Franklin's Gulls. "Thousands of *Yellow-headed Blackbirds* . . . kept up a constant din.'' Upland Sandpipers and Burrowing Owls nested on the nearby mainland. Five mi (8 km) east of the 76 headquarters at "Lake of the Narrows'' just north of Sidewood, there were 15,000 to 20,000 nests of Franklin's Gulls, in an area "1000 yards wide by 100 yards long.''[2]

In 1906, Bent returned on 5 June with Louis B. Bishop of New Haven, Connecticut. Alfred Eastgate of North Dakota joined them 2 weeks later as taxidermist and general assistant. Bent left on 1 July but soon after this Bishop was joined by Dr. Jonathan Dwight, Jr. of New York City and they stayed into August to study the fall shorebird migration. The entire party was in the Crane Lake area from 22 to 26 June. Now for the first time, Lark Buntings were very common near the lake, and they learned to recognize the song of the Sprague's Pipit "up in the sky almost out of sight.'' On visiting the island in Crane Lake, they were disappointed to find only three duck nests: "A coyote had been living on the island and had cleaned out all the nests and driven the ducks away.'' However, the nearby Western Grebe colony had doubled to "several hundred pairs.''[2]

In 1907, Frank M. Chapman, editor of *Bird Lore,* came to Crane Lake and Bigstick Lake to secure material and data for a Western Grebe habitat group for display in the American Museum of Natural History in New York.[5] Accompanied by the famous bird artist, Louis Agassiz Fuertes, Chapman arrived at

Eared Grebe. *Gary Seib*

Maple Creek about 8 June and left on 2 July. They stayed on the west side of Crane Lake at Mr. Andrew Scott's sheep ranch on Section 1, Township 11, Range 24, where they "occupied a wool shed within a few yards of the corral into which two thousand sheep were driven nightly, while awaiting their turn in the shearing pens. The experience gave us a lasting conception of the vocal abilities of sheep and lambs . . ."[4] On the grassy island nearby, "two hundred yards long and half as wide" and about 150 yards (135 m) from shore, there were 2 pairs of Canada Geese nesting "in spite of the fact that their eggs are always taken."[4] In addition about a dozen ducks, chiefly Gadwalls, a hundred or more Common Terns and several hundred Ring-billed and California Gulls nested there. They also visited the island where Bent found so many duck nests in 1905, on the south side of the lake near the mouth of Bear (Piapot) Creek. The rancher had cut the grass and a pair of mink were present in addition to the coyote evident in 1906, so that in 1907 Chapman found only 6 duck nests on that island.

Chapman wrote on his return: "The region has well been called the nursery of the wild fowl, as at one time were our border states to the south. But the advance of civilization, which first transforms a buffalo range to a cattle country, and later to a wheat ranch, has already reached the early stages of its agricultural development about Maple Creek, and the forced retreat of the wild fowl to the remote north is only a question of time. The Canadian Government would do well to set aside some of its still unsettled lands as permanent breeding reservations, to which each year, the water-fowls could return to nest. Such reservations would in truth be nurseries, and, in permitting a bird to reproduce, would be of infinitely more importance than preserves which afford protection only during the winter."[3] When Harry Coulter boarded with Mrs. Andrew Scott in the nearby village of Piapot in 1926-27 (Piapot village was built on land purchased from the 76 ranch company in 1910 and after 1911 Piapot station replaced the Crane Lake station to the east), she proudly displayed the original paintings sent her by Fuertes.

In August 1920, P. A. Taverner pitched his tent for a few days at Coulter's ranch at the extreme northeast corner of Crane Lake, and had meals with the Coulters. He subsequently sent them an autographed copy of his *Birds of Western Canada*. In later years, R. D. Symons stayed for a week at the Coulter ranch, and Clarence Tillenius came there to paint Mule Deer, which had first appeared about 1922 (White-tailed Deer did not come until about 1938). Harry Coulter himself collected what was probably the first Saskatchewan specimen of the Kangaroo Rat in 1933, and took it to the editor of the Tompkins *Progress*.

In June 1980, my wife, Mary, and I visited with rancher Harry Coulter and were told about the history of the water levels and of visiting naturalists. When Harry's father, George Coulter, settled on that spot in 1901, the area was almost totally devoid of trees, due to repeated prairie fires. Geese and ducks appeared in clouds. Swans, almost certainly Trumpeter Swans, summered in the marshy area east of the lake for the first year or two. Indeed, Harry Coulter told us that the first crop planted on the east shore of Crane Lake, by Sandy McCarthy and Charlie Bertram, was a lure crop to entice swans, in order to obtain swans' down.

Crane Lake had peak water levels, reaching the highest shoreline marks in 1972 through 1929 when George Coulter operated a large motor launch on the lake. By 1933, levels had dropped so that the remaining stagnant water was filled with algae, and the Coulters had 30 cows die from drinking it. By 1935 there were only scattered potholes of water left in the lakebed. In 1951, the heavy runoff breached two major dams, the Canadian Pacific Railway dam and the Caswell dam, on the draining creeks, and the lake suddenly filled again.

On 18 May 1958, on an island near the old Scott ranch, Steve Mann counted 256 nests of the White Pelican, 87 of the Double-crested Cormorant, 58 of the *Common Tern* and 428 of gulls, chiefly California with a sprinkling of Ring-billed near the center of the island.[7]

On 23 June 1960, Mary and I went with Steve Mann to this island 2 days after a heavy downpour of rain. There were nearly 1000 recently dead young gulls and a roughly equal number of healthy-looking young together with about 200 young pelicans and over 150 young cormorants.[7]

On 27 June 1961, water levels were down greatly and only a narrow channel of shallow muddy water separated the island from the mainland. About 200 young cormorants and 100 young pelicans were present but there were no active gull nests. At the west end of the island was a small group of dead downy gulls, obviously dead for some weeks, perhaps dating from the hailstorm of 4 June that year.[7]

Water levels have remained very low ever since. Now much of the tributary water coming down Piapot and Bear creeks is expended for irrigation, and there is almost no hope of this "dead" lake, without an outlet, ever being restored to its former size or levels. For this reason, Ducks Unlimited has undertaken a major project

Common Tern. *Wayne Lynch*

to conserve the remaining water in smaller, deeper containments, and thus prevent total loss from evaporation in dry years. This is all that can be salvaged. The myriads of waterfowl that once drew so many distinguished naturalists to the area, regrettably are mere memories of the ever-more-distant past.

Acknowledgements: I wish to thank W. A. Waiser for assistance in locating the parliamentary papers with details of Macoun's 1880 route, and Harry Coulter for general information.

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[6] COMMERCIAL (WINNIPEG). 20 August 1888. A great farming scheme. Quoted in Saskatchewan History 10:115, 1957.

[7] HOUSTON, C. S. 1962. Hazards faced by colonial birds. Blue Jay 20:74-77.

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[10] MACOUN, J. 1896. Natural history. pp. 116A-119A. IN: Annual Report, Geological Survey of Canada, 1894. Ottawa: S. E. Dawson.

[11] MACOUN, J. 1922. Autobiography of John Macoun, M.A., Canadian explorer and naturalist. Ottawa: Ottawa Field-Naturalists Club 303 pp. [Reprinted 1979, Spec. Publ 1 Ottawa Field-Naturalists Club, with new introduction by Richard Glover, Editorial Notes & Bibliographical Essay by W.A. Waiser, pp. 307-335].

[12] PIAPOT HISTORY GROUP. 1979. Piapot prairie trails. Altona: Friesen Printers, 784 pp.

[13] RAINE, W. 1894. Bird-nesting in north-west Canada. Nidiologist 1:67-71, 84-86, 102-106, 117-120; 2:9-10.

[14] VIDETTE (QU'APPELLE). 26 September 1889. Quoted in The Newspaper Scrapbook. Saskatchewan History 6:30, 1953.

BAIRD'S SPARROW INFORMATION REQUIRED

The Committee on the Status of Endangered Wildlife in Canada (COSEWIC) is interested in determining the status of the Baird's Sparrow in Canada. A report is being prepared by *Wayne S. Miller*, 1-351 River Avenue, Winnipeg, Manitoba R3L 0B5. If you have any information on the current or former status of this species, your input would be welcomed.

The following information would be especially useful: a) present breeding locations—give distance and direction to nearest town/city, area of site (square mile), estimated number of pairs; b) former breeding locations, including the above information and the last year known for site use by Baird's Sparrows. Please include name, address and telephone of observers.

POSSIBLE BAR-TAILED GODWIT IN SASKATCHEWAN

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On 28 July 1983 there was a single godwit on the northeast shore of Porter Lake near Aberdeen, Saskatchewan. Using a 25-50x60 telescope on a tripod, I viewed the bird stationary in shallow water for approximately 12 minutes at a range of about 20 m. I made no detailed notes at this time. Following is a description based on notes taken about 1 hour after seeing the bird.

Description

The bird was of the same size as Hudsonian Godwit with a long slightly upturned bill.

Plumage of the head and neck were dull reddish, with colour extending down breast to lower belly. Under tail coverts were whitish. The tail was white with black transverse bars. Upper parts were very dark, the wing similar except for the primares, which were darker.

Eventually this godwit flew north towards the end of the lake. In flight the following features were noted: indistinct thin whitish wing bar, slightly more distinct on secondaries; tail white with transverse black bars; rump white, extending up back in a dowitcher-like V.

Discussion

I am familiar with this species in England in winter (fall) plumage and to a lesser extent in summer (spring) plumage. Though the structure was consistent with the species seen in Britain, the Bar-tailed Godwit in England is more orange or buffier in my experience, with the upper parts browner and not so dark as this bird's. The British Bar-tailed Godwit shows no trace of a wing bar; however I have not noticed this specifically on spring birds.

Assuming Bar-tailed Godwits are the same worldwide, it would appear that this bird showed characteristics of both Bar-tailed and Hudsonian Godwit. It resembled Bar-tailed in having red on the head and neck as well as breast and belly, a transversely barred white tail and white rump extending up the back in a V. The indistinct wing bar would appear to be an intermediate condition between the two species. It resembled Hudsonian Godwit in the colour of the red plumage and that of the upper parts.

There would seem to be 3 possibilities: (i) it was a Bar-tailed Godwit; (ii) it was a mutant Hudsonian Godwit; (iii) it was a hybrid Hudsonian-Bar-tailed Godwit.

I am not familiar with the plumage of eastern palearctic or western nearctic birds of this species.* It would not seem likely that a single gene mutation could account for the extent of the observed differences from Hudsonian Godwit. I understand that Hudsonian Godwit breeds locally in Alaska. Could this bird have been a hybrid Hudsonian-Bar-tailed Godwit?

Summary

My initial identification was based on the extent of red (reaching head and neck), the tail pattern (barred), the white rump and back. I did not think the colour of the red or the upper parts was critical, nor pointed towards Hudsonian Godwit. Peterson's Field Guide to Western Birds depicts Bar-tailed Godwit as having an indistinct wing bar consistent with the bird seen at Porter Lake.

* EDITOR'S NOTE: The Bar-tailed Godwit that breeds in Alaska is reported to have a "poorly defined wing stripe" (R. H. Armstrong. 1980. *A guide to the birds of Alaska*. Alaska Northwest Publishing Co., Anchorage). In *The birds of Canada*, Godfrey mentions a single Canadian specimen from British Columbia.

EARLY FLEDGING RECORD OF WESTERN MEADOWLARK IN MANITOBA

MARTIN K. McNICHOLL, 320 Markham Street, Toronto, Ontario. M6G 2K9

On 26 April 1969, while helping Robert J. Brown cannon-net Sharptailed Grouse at Hodgson, Manitoba, we set a large-mesh mist net at the edge of the grouse "dancing ground" to capture grouse that flushed before the cannon net landed. After one firing, we found a recently fledged Western Meadowlark in the net. The meadowlark had the general adult plumage markings, but these were not yet in full colour and the black V was not yet well defined. The bird could fly only a few metres at a time. Since I did not have the correct band size for meadowlarks with me, I photographed the bird and released it.

Lanyon gave incubation periods for seven Western Meadowlark nests as 13 to 16 days, and Bent cited two earlier sources as stating 13 or 15 days.[3] [10] Bent quoted Dawson and Bowles as stating that Western Meadowlark young may leave the nest four or five days after hatching, but this is likely only in response to disturbance.[3] Skaggs observed young from a nest of the Eastern Meadowlark to leave the nest 14 days after hatching, when they were "not able to fly 10 feet," a stage probably comparable to the Manitoba bird.[25] Taking 14 days as a typical fledging period and adding a minimum incubation period of 13 days, the fledgling that we caught on 26 April must have been from a nest in which incubation started no later than 30 March, and probably a few days earlier.

Of 14 Manitoba records gleaned from the literature (*Table 1*), only one reports nesting in April. Similarly, nesting dates reported on 40 cards from Manitoba in the Prairie Nest Records Scheme ranged from 17 May to 22 July (*Table 2*). Nesting dates for other provinces and states in the Northern Great Plains are comparable. For example, Bent listed egg

Table 1. PUBLISHED NESTING DATES OF WESTERN MEADOWLARKS IN MANITOBA.

Date	*Location*	*Details*	*Source*
4 June 1882	Carberry	young in nest; left by 17 June	27
23 May 1926	Portage la Prairie	3 eggs - C. L. Broley	11
30 May 1926	Rosser	3 young 2 days old - Broley	11
5 June 1926	Headingly	2 nests: 5 & 6 eggs. - Nat. Hist. Soc. Manitoba	11
22 May 1927	St. James (Winnipeg)	3 eggs - M. Smith	12
30 May 1927	St. James (Winnipeg)	3 nests: 5 eggs, 6 eggs, 5 young - J. Wardrope & A. Geddes	13
27 May 1928	St. Vital (Winnipeg)	5 eggs - H. Mossop	14
13 April 1930	St. Vital (Winnipeg)	4 eggs - J. V. Wilson	15
10 May 1930	Winnipeg	5 eggs - G. Waight	15
15 July 1930	St. James (Winnipeg)	6 eggs + 2 cowbird eggs - B. W. Cartwright	15
27 May 1933	Norwood (Winnipeg)	2 young - Mrs. A. Haak	16
27 & 30 May 1933	Winnipeg Beach	3 eggs - A. H. Skidmore	16
3 July 1933	Whitemouth	7 eggs - V. Latta	16
23 May 1961	Benito	6 eggs on 23 May, 1 hatched on 31 May, 4 others on 2 June	9

dates from North Dakota for 20 nests as from 2 May to 10 June, and 99 records in the Prairie Nest Records Scheme for Saskatchewan show earliest documented laying as 6 May (coincidently in 1969), with the earliest Alberta record on 16 cards being of a complete clutch on 17 May.[3] All these data confirm my impression that the Hodgson record was unusually early.

Western Meadowlarks do not normally overwinter in Manitoba (but see below). Criddle reported an average spring arrival date at one location (Aweme) for the years 1895-1920 as 1 April, with his earliest record as 21 March 1911.[5] Oberholser listed Criddle's data and added two other Manitoba localities, where earliest reports were 20 and 26 March.[22] Much later, Lawrence retained the end

Table 2. DATA ON 40 NESTS OF WESTERN MEADOWLARK FROM MANITOBA IN PRAIRIE NEST RECORDS SCHEME.

Stage in Nesting	*#Records*	*Dates*
Known construction dates	1	26 May 1976
1 or 2 eggs in nest: known or probable laying records	10	17 May - 20 June (date discovered)
Complete clutches of 3-7 eggs	21	18 May - 17 July
Known hatching dates (first known hatch)	6	3 June - 1 July
Nest found with young hatched	2	25 June; 14 July

of March to first week of April as the usual arrival date, but indicated that arrivals were known from the first few days of March.[17] There are several other records of early arrivals in the prairie provinces, with records in Manitoba at least as early as 23 February.[8] [24] [26] Moreover, in milder winters, large numbers may be present in the province by the beginning of the last week in March.[20] Thus, the early nesting date reported here could involve a pair in which both adults arrived earlier than usual. However, 1969 was not a year in which large numbers appeared early; in fact, Mossop's earliest reported arrival that year was a rather late 8 April.[21]

Alternatively, one or both of the nesting adults may have over-wintered. Some of the "early migration" records reported above may actually represent previously undetected wintering birds. Although not usually a wintering species, there are several records of Western Meadowlarks in winter in Manitoba, Saskatchewan and Alberta.[1] [2] [4] [6] [7] [18] [19] [23] [24] [28] [29]

Acknowledgements

The observation documented in this note took place incidental to studies of Robert J. Brown while both he and I were studying at the University of Manitoba. Cards of the Prairie Nest Records

Western Meadowlark. *Fred Lahrman*

Scheme kindly loaned by Herbert W. R. Copland helped place the record in perspective. Comments on an earlier draft by Jerome A. Jackson and two anonymous reviewers were helpful in revising the manuscript.

[1] ANONYMOUS. 1945. Bird notes. Blue Jay 3(3)24.

[2] BELCHER, M. 1980. Birds of Regina. Revised ed. Sask. Nat. Hist. Soc. Spec. Publ. 12.

[3] BENT, A. C. 1958. Life histories of North American blackbirds, orioles, tanagers, and allies. U. S. Natl. Mus. Bull. 211.

[4] BRIMACOME, E. 1977. A winter meadowlark. Edmonton Nat. 5:58-59.

[5] CRIDDLE, N. 1922. A calendar of bird migration. Auk 39:41-49.

[6] HOOPER, D. F. 1970. Meadowlark winters at Somme. Blue Jay 18:52.

[7] HOOPER, D. 1981. Unusual winter bird records from Somme, Saskatchewan. Blue Jay 39:184.

[8] HORCH, P. 1981. Bird news. Man. Nat. Soc. Bull. 4(9):12-13.

[9] KOZIOI, M. 1961. Meadowlark's nest. Blue Jay 19:129.

[10] LANYON, W. E. 1957. The comparative iology of the meadowlarks (*Sturnella*) in Wisconsin. Publ. Nuttall Ornithol. Club No. 1.

[11] LAWRENCE, A. G. 1926. Breeding records. Chickadee Notes No. 272. Winnipeg Free Press 10 June 1926.

[12] LAWRENCE, A.G. 1927. Breeding records. Chickadee Notes No. 323. Winnipeg Free Press 2 June 1927.

[13] LAWRENCE, A.G. 1927. Breeding records. Chickadee Notes No. 328. Winnipeg Free Press 7 July 1927.

[14] LAWRENCE, A. G. 1928. Nesting reports. Chickadee Notes No. 376. Winnipeg Free Press 7 June 1928.

[15] LAWRENCE, A. G. 1930. Breeding records for 1930. Part II. Chicadee Notes No. 488. Winnipeg Free Press 11 August 1930.

[16] LAWRENCE, A. G. 1933. Breeding records for 1933. Part II. Chickadee Notes No. 646. Winnipeg Free Press 11 August 1933.

[17] LAWRENCE, A. G. 1958. When the birds visit us. Winnipeg Free Press April 1958.

[18] MOSSOP, H. 1960. Summer birds in winter. Chickadee Notes No. 270. Winnipeg Free Press 18 March 1960.

[19] MOSSOP, H. 1960. Summer birds seen. Chickadee Notes No. 309. Winnipeg Free Press 21 December 1960.

[20] MOSSOP, H. 1966. Migration reports. Chickadee Notes No. 585. Winnipeg Free Press 2 April 1966.

[21] MOSSOP, H. 1969. (untitled). Chickadee Notes No. 742. Winnipeg Free Press 26 April 1969.

[22] OBERHOLSER, H. C. 1921. The migration of North American birds. Second series. XV. Yellow-headed Blackbird and meadowlarks. Bird-Lore 23:78-82.

[23] ROY, F. 1943. (Untitled). Blue Jay 1(3):21.

[24] SADLER, T. S., and M. T. MYRES. 1976. Alberta birds 1961-1970. Prov. Mus. of Alberta Nat. Hist. Sect. Occas. Paper No. 1.

[25] SKAGGS, M. B. 1976. Notes on a meadowlark nesting. Inland Bird Banding News 48:16-18.

[26] STELFOX, J. G. 1958. Early meadowlark in Alberta. Can. Field-Nat. 72:171.

[27] THOMPSON, E. E. 1891. The birds of Manitoba. Proc. U. S. Natl. Mus. 13:457-643.

[28] WARD, A. 1955. The unwelcome albino. Blue Jay 13(2):15.

[29] WHITE, E. J. 1960. Late records of summer birds. Blue Jay 18:52.

CURLEW SANDPIPER IN MANITOBA

STEWART HOLOHAN, 267 Talbot Avenue, Apt. 17, Winnipeg, Manitoba. R2L 0P7

On 1 June, 1981, while John Christie and I were doing a routine shorebird count at Oak Hammock Marsh near Winnipeg, I was very surprised to find an adult Curlew Sandpiper in full summer plumage feeding about 55 m away. The bird was unmistakable to me as I have seen the species many times over the past 24 years in Europe, Australia, and just 12 months previously at Lake Baikal, U.S.S.R. In addition I have mist-netted birds and handled specimens in all plumage stages.

The following is a summary from field notes.* Sketches were also made. The measurements have been translated into metric.

Description

The principal features that identified the bird were that it was approximately the size of the Dunlin beside it, and had a long, thin, decurved bill, but much thicker than those of the Wilson Phalaropes also in the general area; it had a white rump when flying, and a blackish tip to the upper tail. The front and underparts of the bird were almost entirely a deep red wine colour (#8 Carmine in Smithe[2]). This colouration together with the 50 mm long decurved black bill (the curve more pronounced at the tip) ruled out Red Phalarope, Wilson's Phalarope, Red Knot and Stilt Sandpiper. The bird had a prominent white wing bar in mid-wing upper side when in flight. The underwings were white.

The bird was feeding among Dunlin and White-rumped Sandpipers with Stilt and Semipalmated Sandpipers plus Wilson's Phalaropes in the general area. It was longer legged than Dunlin, but not as slim looking as the Stilt Sandpipers. It was not as "dumpy looking" as the Dunlin. Body shape, bill shape, and colouration were totally different from the Stilt Sandpipers.

The main plumage pattern was that the whole front of the bird and underparts to beyond the leg area were a deep red wine colour. This colour was uniform on the breast and underparts but faded on the flanks; it was darker on the side, the neck, cheeks, ear coverts, and throat. This colour blended into very dark brown on the baçk of the neck and crown. The mantle had a somewhat scaly appearance, as had the wing coverts. The birds eyes were completely black with an area of pale feathers surrounding them. The legs were thin and black and an estimated 100 mm long.

The tail was rounded at the tip, but not as pointed as in the Upland Sandpiper. The wings were pointed at the tips and extended beyong the tail; the underwings were white. The upper side

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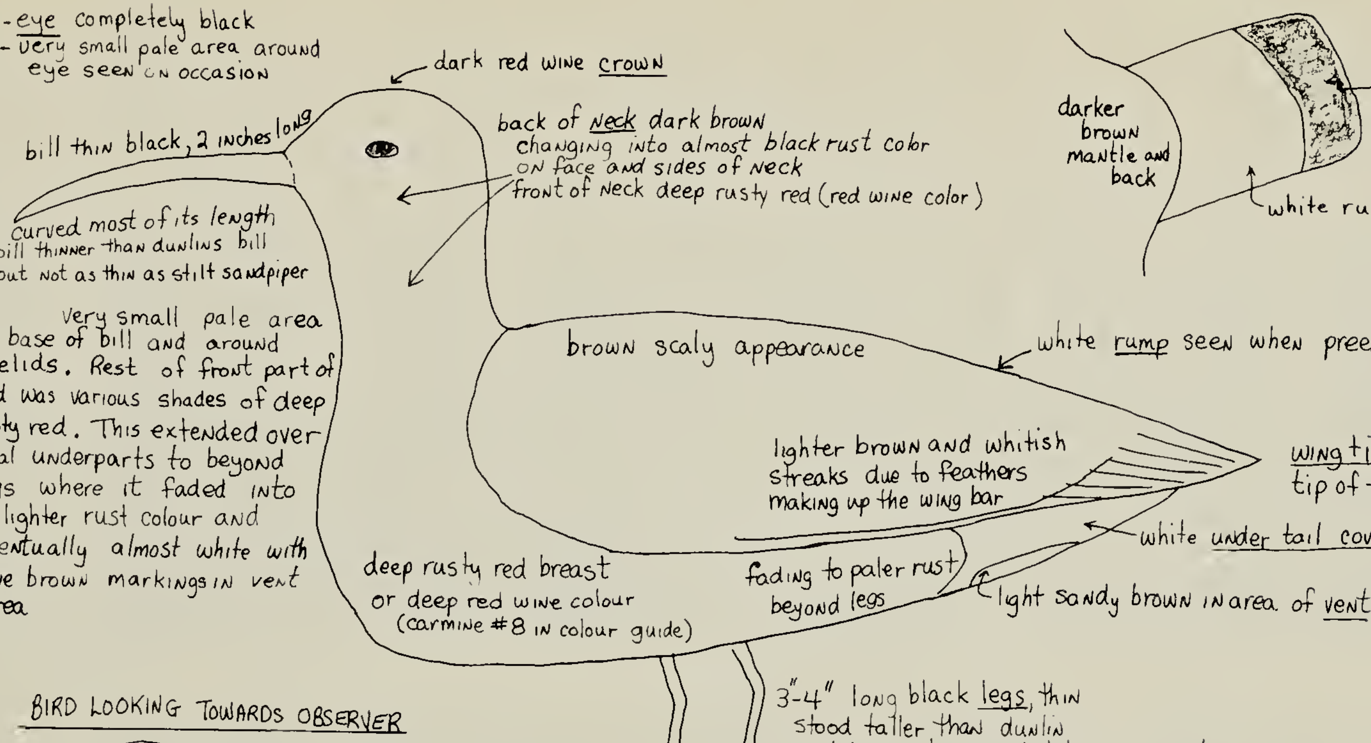
* Abridged to reduce repetition. The original notes were made on a form under the following headings: General Impressions; Comparison Species; Similar or Confusing Species; Field Marks; Important Details; Tail and Wings; What was the bird doing?; Habitat; Behaviour; Food and Feeding and Viewing Conditions. Although details can be repeated under the headings, and additional headings could be useful, this method of recording field observations is valuable in avoiding the all-too-common error of not recording details important in distinguishing similar species. The illustration on the following page is a copy of the original field sketch. — Ed.

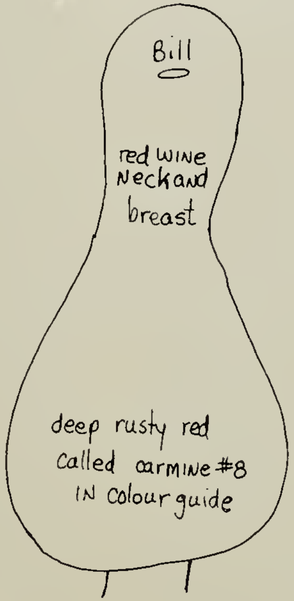

- eye completely black
- very small pale area around eye seen on occasion
dark red wine crown
bill thin black, 2 inches long
curved most of its length
bill thinner than dunlins bill
but not as thin as stilt sandpiper
back of Neck dark brown
changing into almost black rust color
on face and sides of neck
front of neck deep rusty red (red wine color)
brown scaly appearance
white rump seen when preening
lighter brown and whitish streaks due to feathers making up the wing bar
wing tips extended beyond tip of tail
white under tail coverts
deep rusty red breast
or deep red wine colour
(carmine #8 in colour guide)
fading to paler rust beyond legs
light sandy brown in area of vent
3"-4" long black legs, thin
stood taller than dunlin
and longer bodied but less dumpy looking

Very small pale area at base of bill and around eyelids. Rest of front part of bird was various shades of deep rusty red. This extended over total underparts to beyond legs where it faded into a lighter rust colour and eventually almost white with fine brown markings in vent area

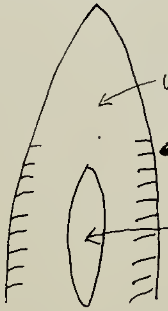
bird fed in water almost up to folded wings, continually emersing its bill under water at a 70° angle

UPPER TAIL

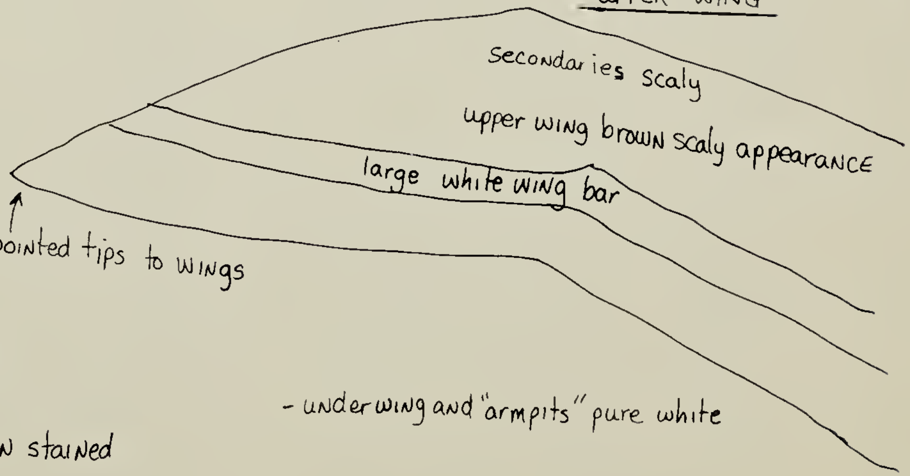
BIRD LOOKING TOWARDS OBSERVER


Bill
red wine Neck and breast
deep rusty red called carmine #8 in colour guide

UNDERTAIL & VENT AREA



UPPER WING



- underwing and "armpits" pure white

of the tail had a black band at the tip; this band was estimated to be more than 13 mm wide.

Habitat and Behaviour

The habitat where the bird was seen was a large shallow pool in what was formerly a field, but is now surrounded by dykes and is usually covered by water to a depth of 1-2 metres.

The bird spent most of the time feeding and walking about in water belly deep or even as far as its folded wings. It emersed its head under water with almost every feeding movement. The bill action was rapid (15 strokes per minute) up and down at a 70° angle. The gait and manner of walking were similar to Dunlin with which it was seen walking around on the mud. It was also seen preening, and flying parallel to the observers. The bird was seen below, or at the eye level of the observers. Its movements were slow and measured, except for its bill action which was rapid as it put it under water continually to feed on unknown organisms. The Curlew Sandpiper flew with the Dunlin and White-rumped Sandpipers whenever they flew, for a few seconds only on each occasion. The bird preened in the normal manner of a shorebird, working on the breast, underparts, wings and rump areas. When it was preening a white membrane was flicked across its eye on a few occasions.

Observation Conditions

The bird was seen continuously between 1915 and 1945 h. in light sunlight. It was in the open with the sun behind the observers. The bird was viewed at estimated distances of 55 to 91 m. Optical equipment used was a tripod mounted 22 x 80 binocular and a tripod mounted telescope.

Discussion

Curlew Sandpipers breed along the Arctic coastal regions of Siberia and occasionally to Alaska. They winter in Africa south of the Sahara, around the Indian Ocean, and S.E. Asia and Australia.[3] In Canada it is regarded as a casual visitor.[1] This was the first recorded observation of this species in Manitoba. Another observation of a Curlew Sandpiper was reported from North Dakota around the same week.

[1] GODFREY, W.E. 1966. The Birds of Canada. National Museum of Canada Bulletin 203.428 pp.

[2] SMITHE, F.B. 1975. Naturalists' Color Guide. The American Museum of Natural History.

[3] WILSON, J.R., M.A. *Czajkowski* and M.A. *Pienkowski*. 1980. The migration through Europe and wintering in West Africa of Curlew Sandpipers. Wild Fowl 31:107-122.

Chris Adam

FEMALE COOPER'S HAWK BREEDING IN BROWN PLUMAGE, APPARENTLY FOR FOUR YEARS

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A small proportion of female Cooper's Hawks breed while still in juvenile plumage. Such birds were observed in 2 out of 36 pairs by Meng and in 2 out of 34 pairs by Reynolds and Wight.[3] [4] In male Cooper's hawks this phenomenon is evidently much more unusual. Rosenfield and Wilde report an instance and wrote that they knew of only one other case.[5]

In these accipiters the molt into the adult plumage normally begins in the spring of their first full year and is not complete until the following fall. It seems likely that in most of the females breeding in juvenile plumage noted above development of the mature plumage was merely delayed for a few months and that they were in the adult plumage during their second breeding season.

Strong circumstantial evidence, set out below, indicates that I observed one and the same female in a brown plumage (apparently different from that of normal juveniles), which bred in the same small grove of trees in 1979, 1980 (no observations in 1981) and 1982. However since it was not artificially marked there is no absolute proof that the same individual was involved throughout.

The relevant observations are as follows: on 19 August 1979 in the poplar wood of about 6 ha, in which all subsequent observations were made, I saw a brown (judging by its size) female Cooper's Hawk. It cackled, apparently defiantly, from a slim tree trunk which was bent over like a hoop and so offered the hawk a nearby horizontal perch. In the trees nearby were two young Cooper's Hawks which could already fly. On a subsequent visit to this spot I noticed the empty nest in the fork of a sizeable poplar a few metres from the spot where I had seen the hawks.

On 1 July 1980 the "ga ga ga" calls and agitated flying about of a brown female enabled me to find the current nest which was only about 200 m from that used the year before. Two young hawks were perched in branches of the nest tree. On 26 July there were three young nearby, (and at times in the nest) and a fourth which stayed in the nest. By watching the nest from partial concealment a fairly close view of the female was obtained through 10x binoculars as she perched briefly in a low branch. Her upper parts, apart from darker bars across the tail, were uniformly beige, paler than the brown of the backs of the young. I failed to record the colour of her lower parts but believe that they were merely paler than the rest and without the conspicuous spots of the normal juvenile or the bars of the adult plumage. Her eyes were bright orange red as they normally are in adults, a point which makes it unlikely that she was a yearling. The male was not seen in the wood during visits up to 19 August when two of the young were last seen there. On this and other occasions they called "ga ga ga" like the adult female and when apparently begging for food uttered a plaintive "pee aa" usually repeated 2-3 times. During July the pectoral girdles of 2 young Ruffed Grouse and a nearly intact Red-backed Vole were found on the ground beneath the nest.

In 1981 I was out of the country for all of July and part of August. No Cooper's Hawks were seen in the wood during visits there before and after this period.

On 1 May 1982 I saw a "brown" adult fly into the nest which had been used in 1980. Apparently it noticed me almost immediately for it flew to a tree some 20 m away, cackled and twice more flew to another perch and finally out of sight. No visits to the nest were made for 2 weeks lest the birds desert. On 14 May the nest looked as if some twigs had been added to it in the interval. Cackling calls, softer than the female's, led me to a nearby sedge-grown clearing where I found the male perched on an arch-like pole. It was possible to observe this hawk without causing it to fly away.

On 15 May I flushed this bird from the edge of the clearing. A dead poplar, broken off three feet from the ground but still connected to the longer upper part, supported in a horizontal position by other trees, evidently served as the hawk's plucking log. Feathers of a solitary sandpiper and of two unidentifiable robin-sized birds, apparently of different species, were found there as well as some vole or mouse hair. In the course of repeated visits up to 7 August, the last date when remains of prey were found by the log, the following items were identified: 4 Red-winged Blackbirds, 2 Robins, a Sora, a Mountain Bluebird, a Yellow Warbler, an adult female Green- or Blue-winged Teal, some Snowshoe Hare fur. The Solitary Sandpiper, Sora, teal, bluebird and Yellow Warbler are not listed by Meng among the food items of nesting Cooper's Hawks in New York State and Pennsylvania.[2] No doubt local availability accounts for differences in the two lists, but a full-grown teal is notably large prey for this hawk.

When examined on 29 May the nest held four eggs. The brown female was flushed from the nest several times before and after this date. On 23 June there were young judged to be about 3 days old and a cracked egg in the nest. Pieces of the shell of one egg were found about 5 m from the base of the nest tree. Brown and Amadon state that the female carries the egg shells 50 yards or farther from the nest.[1] In early June a few primaries and a tail feather, evidently moulted by the female, were found between the nest tree and the plucking log.

On 2 August two fully feathered young, apparently all that had survived, were perched near the nest but flew off cackling at my approach. Only on this occasion were remains of prey, of a sparrow-sized bird and feathers of a blackbird, found below the nest. Next day the two young were seen near the plucking log below which lay the plucked trunk of a robin.

The usual call of the adult female was the cackle already described but on a few occasions after leaving the nest or when about to return to it she uttered softer short "keek" or sharper "pfeet" calls.

On 29 April 1983 I had a glimpse of a Cooper's Hawk flying out of the nest which had been used the year before. The site was left undisturbed until 13 May when I found the nest much enlarged, (with the addition of a branch with green leaves) and occupied by a Red-tailed Hawk which, with its partner, eventually raised young there. On a few occasions thereafter an adult Cooper's Hawk was seen on hunting flights in the general area but I was unable to find a nest.

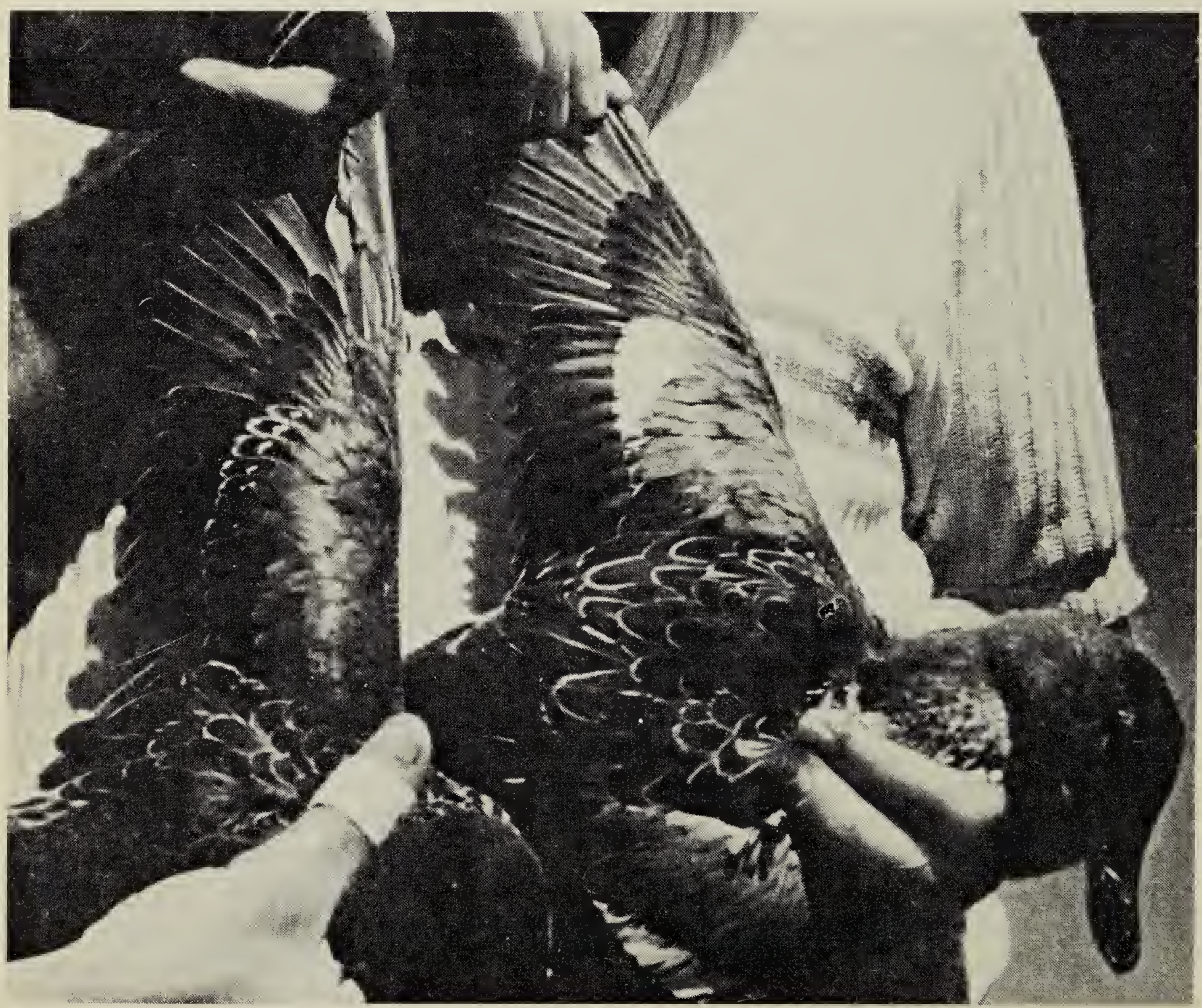
[1] BROWN, L. and D. AMADON. 1968 Eagles, hawks and falcons of the world. McGraw-Hill, New York. 945 pp.

[2] MENG, H. 1959. Food habits of nesting Cooper's Hawks and Goshawks in New York State and Pennsylvania. Wilson Bull. 71:169-174.

[3] MENG, H. 1951. The Cooper's Hawk. Ph.D. Thesis. Cornell University, Ithaca, N.Y.

[4] REYNOLDS, R.T. and H.M. WIGHT 1978. Distribution density and productivity of accipiter hawks breeding in Oregon. Wilson Bull. 90:182-196.

[5] ROSENFIELD, R.N. and J. WILDE 1982. Male Cooper's Hawk breeds in juvenile plumage. Wilson Bull. 94:213.



Male and female Blue-winged Teal. *J. B. Gollop*

RAVENS EATING SALT?

ROBERT W. NERO, Wildlife Branch, Box 14, 1495 St. James Street, Winnipeg, Manitoba. R3H 0W9

Northern finches are known to have an avid craving for salt, possibly as a result of their mainly vegetarian diet. Evening Grosbeaks, Purple Finches, Pine Grosbeaks, Hoary Redpolls, Common Redpolls, Pine Siskins, Red Crossbills, and White-winged Crossbills all exhibit this trait.[6] The crossbills, especially, are notorious for foraging on roads in winter for a source of salt.[3] [4] The latter turn their heads sideways and use their agile tongues to glean salt from snow and ice, and lick snow from pebbles imbedded in roadways. Often they suffer high mortality as a consequence of accidental collision with passing vehicles. Mortality in crossbills as an apparent consequence of interest in salt on roads in Maine was vividly described in the *Blue Jay*.[1] More recently, following an unusual invasion of White-winged Crossbills in southeastern Manitoba, mortality on highways, evidently owing to persistent efforts to glean salt, was again reported.[5]

Some other species also show an interest in salt, and there is some recommendation that salt be included with food at feeders to attract such birds; these are: Mourning Dove, Downy Woodpecker, Hairy Woodpecker, Common Crow, jays, titmice, nuthatches, House Finch, American Goldfinch, and House Sparrow.[3] [7] Wing states: "Notwithstanding the common concept that salt is injurious to birds, a little of it is needed, but often sufficient amounts are obtained from such items as bread crumbs and peanut butter. Some winter finches seem to crave salt especially, perhaps because of mineral deficiencies in their customary diet."[7] Wing adds, the water-soluble salts that attract birds in western U.S. "include chlorides, sulphates, hydrocarbonates, and carbonates of sodium. Some magnesium and calcium salts may also be present."

I could find no reference to the Common Raven feeding on salt, hence, the following observation is of interest, especially in view of the known habit in this respect of other members of the same family, namely the jays and the Common Crow.[3]

On 26 March 1983, while driving with Herbert W. R. Copland on PTH 12, 2-3 miles south of the junction with PR 317, about 30 miles northeast of Winnipeg, we encountered a compact flock of 21 Ravens standing on the west side of the pavement and apparently pecking at something. As we approached, they flushed and flew off a few hundred feet into an adjacent cultivated field. It had been snowing lightly since early morning so there was some snow in the otherwise black field. If the Ravens had been seeking snow (for water) or grit they could presumably have found those items in the field. To our surprise, we found no signs of prey on the road that could have attracted the Ravens. In the field they were actively moving about, showing no interest in their surroundings, but as soon as we drove past, the entire group of birds flew back to the same site on the pavement, clustering as previously. We returned for a further examination of the site, flushing them off the road a second time. Tracks left by the birds in about an inch of slush on the road showed that they had been standing or walking about in an area on the outer three feet of pavement. We could see no prey remains or grain or any foodstuff, but clearly something in the slush interested them. We did observe some pale, ochre-colored substance in the slush where the tracks were most abundant. These observations were made between 11:30 and 11:40 a.m.

At the time, we assumed that the colored material was simply sand. As we drove along, however, we discussed the possibility of the Ravens having been obtaining salt from the slush, for the previous weekend we had learned from Canada Customs Officer Stan Jernberg, that a full-grown moose had been observed in the daytime on its knees in the center of PTH 12 near South Junction in extreme southeastern Manitoba apparently licking salt from the road.

Elaine Sinclair put me in touch with Crance Broughton, Manitoba Department of Highways, Selkirk, from whom I learned that salt, either sodium chloride or calcium chloride, is regularly mixed with sand which is to be applied to icy roads. The salt serves to keep the sand friable so that it can be applied evenly, otherwise it tends to freeze in lumps. According to Broughton, granular salt added to the sand often forms into pellets, sometimes up to a quarter-inch in diameter. This would make it relatively easy for a Raven to pick up salt.

Earlier on the day of our observations we had learned from Greg Sinclair that he had been watching two Ravens building a nest, carrying sticks to a nest site daily for two weeks about 8 miles south of where we saw the flock. Thus, we were puzzled by the ocurrence of a flock of Ravens at this time of year as well as by their behavior on the highway.

It seems that there is a fair basis for assuming that the Ravens in this case were seeking salt from the highway. This needs to be verified and it is hoped that further observations will be made of Ravens in this kind of situation that may substantiate this speculative conclusion.

[1] BAKER, K. D. 1965. An observation of bird mortality on highways. Blue Jay 23:79-80.

[2] BENT, A. C. 1968 (Compiled and edited by Oliver L. Austin, Jr.). Life histories of North American cardinals, grosbeaks, buntings, towhees, finches, sparrows, and allies. Part One. Dover Publ., New York.

[3] DENNIS, J. .V. 1978. A complete guide to bird feeding. Alfred A. Knopf, New York.

[4] LAWRENCE, L. de K. 1949. The Red Crossbill at Pimisi Bay, Ontario. Canadian Field-Naturalist 63:147-160.

[5] SEALY, S. G., D. A. SEXTON, and K. M. COLLINS. 1980. Observations of a White-winged Crossbill invasion of southeastern Manitoba. Wilson Bulletin 92:114-116.

[6] WALLACE, G. J. 1955. An introduction to ornithology. MacMillan Co., New York.

[7] WING, L. .W. 1956. Natural history of birds. Ronald Press Co., New York.

Common Raven. *Fred Lahrman*

POSSIBLE GREAT BLACK-BACKED GULL IN SASKATCHEWAN

STAN SHADICK, 3F-1800 Main St., Saskatoon, Saskatchewan. S7H 4B3

On the afternoon of 9 May 1983, Lawrence Baschak and I were returning home from a camping trip in the proposed Grasslands National Park. Upon reaching Blackstrap Lake (about 40 km se of Saskatoon, Saskatchewan) we decided to stop and search for Greater Scaup which had been seen a week earlier.

As we were scanning several flocks of scaup on the lake, a tremendously large gull flew past at a distance of about 100 m. The wingspan appeared much larger than my recollection for that of a Herring Gull. The gull was in immature plumage with a broad dark terminal tail-band that contrasted with a light-coloured base to the tail and pale underparts. The tail-band was wider than that in immature Ring-billed Gulls. The wingtips appeared darker than the rest of the wing.

Plate 40 in Tuck illustrates typical immature plumages of flying Herring, Glaucous, Ring-billed, Lesser Black-backed and Great Black-backed Gulls.[4] The Blackstrap bird most closely resembled the illustration of a Great Black-backed Gull.

In my opinion, the large size of this gull eliminates the possibility of its being a similarly plumaged California, Herring or Lesser Black-backed Gull. Average gull wingspans are: Ring-billed, 122 cm; California, 125 cm; Lesser Black-backed, 127 cm; Herring, 132 cm; Glaucous, 135 cm; Greater Black-backed, 165 cm.[4] A Great Black-backed Gull has therefore a wingspan 33 cm (25%) greater than a Herring Gull — a difference that should be apparent to an observer familiar with Herring Gulls. The broad terminal tail-band rules out either Glaucous or Ring-billed Gulls.

Although there had been a strong north wind all day with gusts in excess of 60 km/h, the gull showed little difficulty in flying into the wind. It then began to attack a flock of scaup causing them to disperse in all directions. I have previously witnessed such behaviour only in two Glaucous Gulls which visited Saskatoon in January 1983. However, this behaviour has been reported in Great Black-backed Gulls.[3] Moreover, the Smithsonian Identification Manual describes the Great Black-backed Gull to be "much more rapacious and predatory" than the Herring Gull.[5]

The question arises as to how a Great Black-backed Gull, which has never been reported in Saskatchewan, should come to Blackstrap Lake. Range maps in the new Peterson field guide show that it winters in the Great Lakes as far west as Lake Michigan.[2] During late May and June it is a rare visitor to Churchill, Manitoba. In fact, in June 1982, the SNHS Churchill Tour observed an immature Great Black-backed Gull near the motel where we stayed. I would suggest that the Blackstrap bird may have been migrating from the Great Lakes to Hudson Bay and was blown off course by the strong winds of 9 May 1983.

I wish to thank Stuart Houston and Bernie Gollop for reviewing this note.

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NESTING ROSE-BREASTED GROSBEAKS

JEAN BANCROFT, 306-200 Tuxedo Ave., Winnipeg, Manitoba. R3P 0R3.

For the past few summers I have observed nests of the Rose-breasted Grosbeak at Whytewold on Lake Winnipeg. In the spring of 1983 a pair of these birds visited our feeder frequently, and eventually a nest was built for the first time on our property.

A male and female came to the feeding tray on 28 May. The fact that these birds continued to appear at the feeder for many days indicated to me that they might be planning to build their nest somewhere close by. It was not until 16 June, however, that I finally discovered the nest. I saw and heard the male singing its soft sweet song from a high branch of a tall oak in our wooded lot. The nest was in a nearby Saskatoon bush. It was approximately 1.8 m from the ground; the female was sitting. The nest site was surrounded by a thicket of hazelnut. When I made my observations I had to be cautious so as not to disturb these secretive birds.

Unfortunately I did not see the nest being built. Bent states that both male and female take part in its construction;[2] another authority says the nest is built by the female.[5] This nest was firmly but loosely built of slender twigs from the hazelnut bushes, and was lined with fine rootlets. I examined the nest after the young fledged and found it true that I could see through it from below.[2] I could not determine the size of the clutch which varies from 3 to 5.[2]

Several occasions on 17 June I observed the female sitting. In late afternoon the male gave his "tick" call, the female flew up to a high branch on an adjacent tree, and the male gave her a sunflower seed (from our feeder); then he flew down and sat on the nest. She flew away for a respite. Both the male and female incubate. The incubation period is cited as being from 12 to 14 days.[5]

I found it very interesting to watch how both parents shared their duties. The "tick" call was the signal for one or the other to take a turn on the nest;

one flew off and the other flew on immediately. Generally I was able to tell, by the attendance of one or the other at our feeder, which adult was sitting at a particular time. I visited the nest site frequently and found that until the young had nearly fledged, one parent was always on the nest.

On one occasion (21 June) I observed the male singing while incubating. This is the habit of some other members of the family Frigillidae, namely, Black-headed Grosbeak and Red-crested (Brazilian) Cardinal.[4] [1]

I noticed the adults sat higher on the nest 1 July but I was unable to determine if the chicks had hatched. I continued to observe the nest several times daily, and was convinced, by the posture of the adults on the nest, that they were brooding. On 7 July at 1305 I was fortunate to observe the male feeding the young — 4 necks stretched up. The next day at 1930 no parent was present but I heard a bird in the bushes close by.

On 10 July there were three nearly-fledged young in the nest; one sat up higher and flapped its wings. At 1830 the female came to the feeder, ate of the smaller seeds and flew with some in her beak in the direction of the nest. At noon 11 July the nest was empty. The fledgling period appears to conform with the 9 to 12 days cited in literature.[5] Both male and female frequented our feeder until 17 July. They flew in the direction of the nest, however I did not see or hear the fledged young in our wooded lot.

When the female came to our hanging feeder (we had two feeders) she frequently stayed for several minutes. I was able to study her plumage from a distance of about 2.4 m. I was particularly interested because, in the spring of 1978, I had observed and reported what appeared to be a female Black-headed Grosbeak at our feeding tray.[3] The 1983 female had some of the characteristics of the Black-headed in that her breast and belly were tawny yellow and the markings were heavier on sides of the belly than on the breast. Upvardy states that "the Black-headed hybridizes with its eastern counterpart, the Rose-breasted Grosbeak, along their mutual boundary.[6] Could it be that the 1983 nesting female was a descendant of the 1978 Black-headed? This particular female had reddish wing linings. Godfrey mentions that "*immature males* have reddish wing linings", "adult female: similar to young male in first autumn . . . but . . . wing linings yellow."[4] Forbush states "it seems possible that some birds may not acquire highest plumage until the third year or even later."[2]

Every summer brings surprises. I hope that these Rose-breasted Grosbeaks may be able to withstand their long trip to Central America and will return to our garden at Whytewold in 1984. One thing is certain: there will be well-laden feeders awaiting them!

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VARIED THRUSH AT BIGGAR, SASKATCHEWAN

ROBERT WAPPLE, Box 1045, Biggar,
Saskatchewan. S0K 0M0

On 1 October 1983 I decided to go bird-watching at one of our favorite locations in Biggar. At approximately 1500, I was riding my bike down a back alley when I stopped at a fenceline between the last two yards at the east end of the lane. In one yard, (the furthest east), were about 30 American Robins and 3 White-throated Sparrows foraging on the ground among some fallen leaves and crab-apples. I was just glancing over into the other yard when I noticed a peculiar bird on the ground in a familiar robin-like stance.

Upon further study of the "robin", I suddenly realized that I was looking at a male Varied Thrush! The following field marks were obtained from ten m as it faced me: robin size; bright orange stripe above the eye; very prominent black band across its bright orange breast and dull orange wing-bars. After about ten minutes, the bird took flight to a nearby maple tree, where two low-pitched "chucks" were heard. The bird then flew down into the yard on the right and associated with the flock of robins. I noticed no aggressive behavior between the two species. While foraging, the thrush wasn't as active as the robins; it acted more like a Fox Sparrow than a thrush as it kicked up dead leaves and other vegetation in search of food. The bird at all times appeared to be somewhat more alert than the robins, often flying away to nearby shrubs at any unusual noise. It was studied for about twenty minutes at distances from three to twenty metres. A return visit to the area at 1800 failed to turn up the thrush.

On the afternoon of 2 October, it was again observed by myself and later that evening by Chris Escott, a birder from Saskatoon, in the same yard. The thrush was noted briefly during the early afternoon of 3 October by my brother Guy, who obtained several slides in the course of a thirty minute study. The bird was not seen on succeeding days.

The Varied Thrush is a rare but regular transient in Saskatchewan. In the Rosetown-Biggar study area there have been four previous sightings, including the first specimen record for the province. The most recent local observation was a single male in Valley Centre, about 40 km southeast of Biggar, on 25 April 1969.

WATCH FOR COLOUR BANDED GYRFALCONS

During summer 1983, 36 nestling Gyrfalcons were color banded in the Northwest Territories from Coppermine in the west-central N.W.T. to Cape Dorset on South Baffin Island. In addition to the regular U.S. Fish and Wildlife Service band, each nestling received from one to three coloured aluminum leg bands with all members of a brood receiving the same combination. The bands are about 10 mm wide, no more than two bands on each leg. Colours used were red, blue and black, and the sequence (top/bottom) and leg (left/right) are significant.

Observations should be sent to the *Bird Banding Office, Canadian Wildlife Service, Ottawa*, K1A 0E7 and/or *Robert G. Bromley, Bird of Prey Biologist, N.W.T. Wildlife Service, Yellowknife, N.W.T.* X1A 2L9.

A BRIEF SURVEY OF THE BATS OF ELK ISLAND NATIONAL PARK

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Edmonton, Alberta. T5K 2J5

A brief survey was undertaken to establish which species of bats occur in Elk Island National Park (EINP) and to determine their relative abundance. Banfield and van Zyll de Jong show that five species of bats can be expected in EINP.[1] [10] These are: Hoary Bat (*Lasiurus cinereus*), Big Brown Bat (*Eptesicus fuscus*), Silver-haired Bat (*Lasioinycteris noctivagans*), Northern Long-eared Bat (*Myotis septentrionalis*) and Little Brown Bat (*Myotis lucifugus*). In addition two species occur to the west but do not reach Edmonton or EINP (Long-legged Bat, *M. volans* and Long-eared Bat, *M. evotis*). Warden records show that only Little Brown Bat has been previously recorded from EINP.

Bats orient using ultrasonic echolocation calls which bounce off objects including potential food.[2] These calls function much like radar. Normally these calls are above the sensitivity of the human ear. However bat detectors have been used for some time to convert the ultrasonic call into an audible tone. Recently a small detector has become commercially available which permits us to learn about bats from their calls (QMC Mini bat detector, QMC Intruments Ltd., 229 Mile End Road, London, England, E14AA).

Methods

For three evenings, 27 to 29 July 1983 we surveyed areas within EINP for bats, both catching them and listening with a detector for echo-location calls.

Three methods were used to catch bats. Visual searches for roosting bats were conducted in and around buildings at the government compound, administrative building, south gate, south information centre and nearby horse barn. Secondly, at the information centre two 9 m long, 38 mm mesh black mist nets were set against the west wall on the evening of 29 July. Two nets were set over a boardwalk at a marsh on the Amisk Wuche trail on 26 July. Thirdly, a collapsable Tuttle Trap was set in front of the west loading door on the second floor of the horse barn on 29 July.[9] [8]

QMC mini bat detector converts the ultrasonic bat echolocation calls from 20 to 40 kHz to signals audible to us. A detector was tuned alternately from 20 kHz to 40 kHz and back about every two seconds providing continous monitoring of these frequencies. The detector was used for five minutes at each site except at the start of the evening when it was left on continually until the first bats were heard. During the five minute period, the number of passes by bats were counted. Identification of bats using the QMC bat detector followed Fenton, Merriam and Holroyd (*see Table 1.*).[4]:

Results

Captures

Three species of bats were trapped: Big Brown, Little Brown and Northern Long-eared.

A male Big Brown Bat was caught by hand at the peak of the west side of the

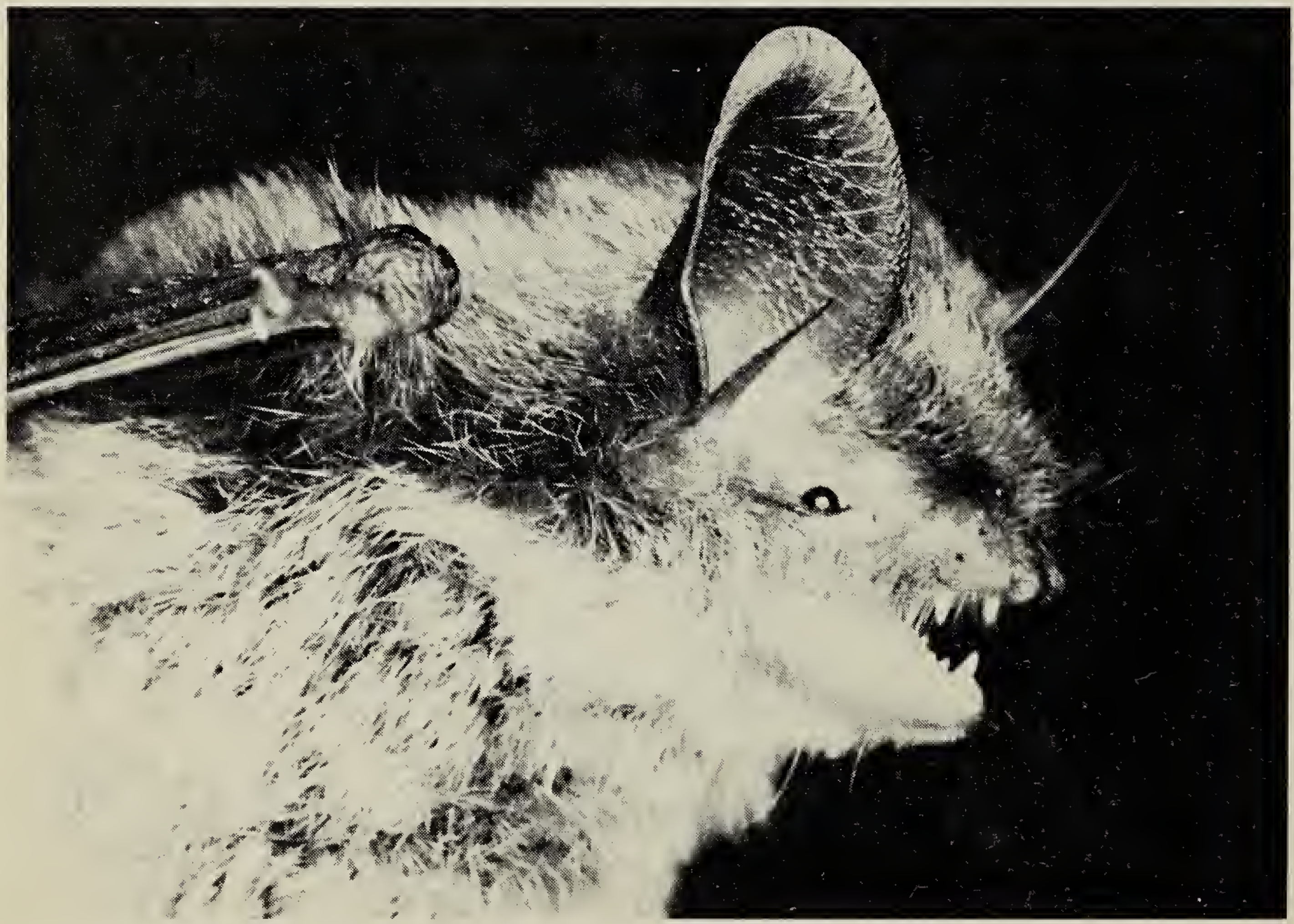
Table 1. IDENTIFICATION OF BATS USING THE QMC BAT DETECTOR

Frequency	*Output*	*Species*
20-25 kHz	a tonal chirp	Hoary Bat
25-30 kHz	a tonal chirp	Silver-haired Bat
40 kHz	a tonal chirp	Red Bat
25-30 kHz	a 'put' sound	Big Brown Bat
35 kHz	a 'put' sound	Long-legged Bat
40 kHz	a sharp tick	Little Brown Bat and other Myotis
40 kHz	a soft tick	Northern Long-eared Bat and other Myotis

south gate house on 28 July and another escaped from the peak at the east side of the building on the following evening. Another male Big Brown was caught in the Tuttle Trap at the horse barn.

Fourteen Little Brown Bats were caught on 29 July and an immature was found by park staff at the stores buildings. Three were caught in the mist nets at the information building. One of these was seen roosting in the evening and was caught at dusk. The other two were caught later at night presumably when they were using the building as a night roost. Ten Little Brown Bats (six male, four female) were taken in the Tuttle trap at 0145 when it was first checked but none were present in it on the morning of 30 July. This could indicate that the bats left the barn over the loosely fitting door but entered the barn some other way.

The Tuttle trap also held a single male Northern Long-eared Bat at 0145.



Northern Long-eared Bat. *M. Brock Fenton*

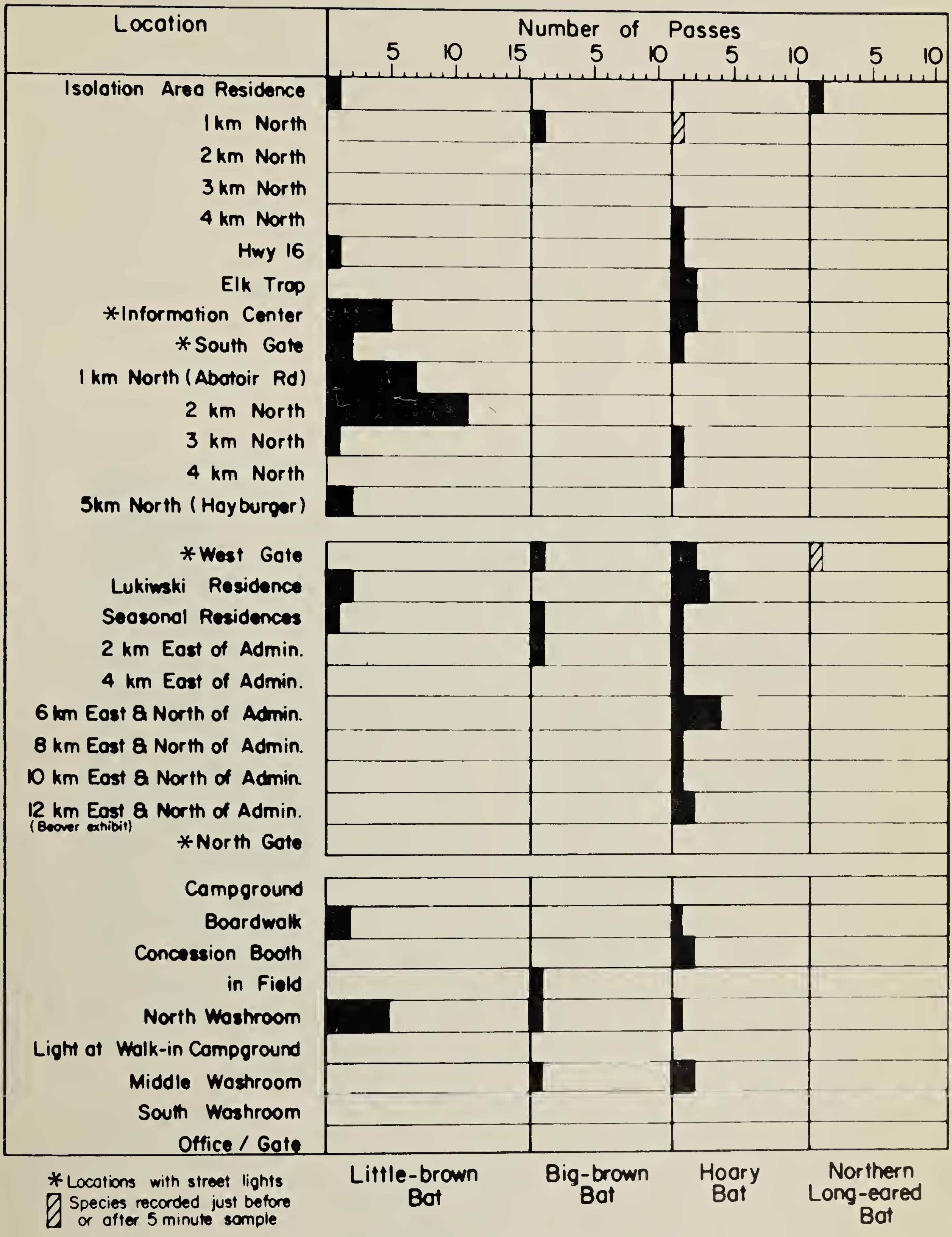


Figure 1. *Results of transects for bat activity along roads in Elk Island National Park. Bars indicate the number of passes in five minute samples monitored with a QMC mini bat detector.*

Echolocation records

The echolocation calls of four species of bats were detected with the QMC Mini Bat Detectors (*Figure 1*). Hoary Bat and Big Brown Bat calls are quite distinctive. The ticks of the *Myotis* group can be split into hard ticks and soft ticks. At Elk Island the hard ticks should be the calls of the Little Brown Bat and the soft ticks those likely from the Northern Long-eared Bat. The Long-legged Bat and Long-eared Bat produce hard and soft ticks respectively but Banfield indicates that Elk Island is just to the east of the known range of both these species.[1]

Based on their calls, the Little Brown Bat was the most common species of bat in EINP followed by Hoary Bat. Big Brown Bat was less common and Long-eared Bat was least common. However, the Long-eared has a quiet call which makes it less conspicuous.

Little Brown Bats were quite clumped in their distribution with 28 of 40 records at only 4 sites (*Figure 1*). Hoary Bats were more evenly distriand buted along the roadways with 31 records at 20 sites compared to 12 sites for the Little Brown Bats. Big Brown Bats were recorded once at each of 7 sites indicating little clumping but 3 sites were near the west gate residences and three sites were at the campground. At EINP 5 areas with street lights were sampled and bats were recorded at four (Figure 1). No bats were heard at the north gate lights, but it was very windy (Beaufort force 4-5) at the time. At the other 4 lights, activity was 0.9 passes per minute.

Bat activity was first recorded between 2236 h and 2245 h on these nights. At this time of year, this is after sunset but the bats could be seen in the twilight.

Discussion

The level of bat activity at Elk Island National Park is low but evenly distributed. Overall, bats were encountered on average every two minutes (0.49 passes per minute) compared to 1.94 passes per minute in 1981 and 0.71 in 1982 in Kootenay, Glacier and Mt. Revelstoke National Parks and 3.41 to 10 passes per minute in southern Ontario.[4] [3] The range of passes per minute in Elk Island was 0 to 2.2 compared to 0 to 6.95 in the mountain parks and 0 to 67 in southern Ontairo (ibid).

Although the level of activity is low, the distribution of bats is more even in Elk Island than in the mountain parks. Bats were recorded at 26 of 31 sites (81%) in Elk Island compared to 10 of 30 sites (33%) on road surveys in the mountain parks. The habitat at Elk Island is superficially less varied and may have fewer "hot spots" for foraging than in the mountains where there were definite foci of bat activity.

One type of activity centre was street lights where bats occurred at the rate of over four passes per minute in the mountains. At the four lights in EINP where bats were heard, activity was 0.9 passes per minute which was greater than the overall average at EINP but still well below 3.4 passes per minute recorded at four lights in the mountain parks in 1981. Thus although lights are a focus of activity for bats in Elk Island they do not appear as important as they are in the mountain parks.

Different levels of activity by bats in these different areas could introduce errors in the comparisons. Insect activity, especially mosquitoes, was very high in Elk Island, much higher than in the mountains. In fact, it may be difficult for the reader to fully appreciate the mosquito activity that was experienced on those three nights unless the reader is currently resting on a bed of nails.

The abundant food supply could result in less time required to become satiated and more time spent roosting and digesting prey at night in Elk Island National Park.

Little Brown Bats were most common in the southerly 3 km of the main road north of Highway 16. Buildings are relatively common in this area including the barn where 10 were caught and the information centre where another three were netted. These buildings provide suitable roost sites for this colonial species. Likewise Big Brown Bats were most frequent near buildings reflecting their roost sites.

In contrast the Hoary Bat did not show any concentration of activity which was expected since it is a solitary forest-dwelling species.[2] Aspen forest was at or near every site that was sampled.

Do the species associate with or avoid each other? The Spearman rank

Hoary Bat. *Robert Barclay*

correlation coefficient, r, using the number of passes of Little Brown Bats and Hoary Bats at each site (N = 33), is 0.143 indicating neutral association of the two species. Thus they appear to be neither associating near a localized abundant food nor avoiding common feeding sites.

This survey did not adequately sample bat activity in all habitats in the park. Most sample sites were on roadsides adjacent to aspen forest. The site 2 km north of the south gate was a grassland and the boardwalk at the campground is over water. All three habitats had bats flying over them but additional sampling would be required to establish any species-specific preference.

Bats have considerable public interest and consequently are potential subjects for public education programmes. The QMC mini bat detector is suitable for "listening" for bats and can be connected to an amplifier and speakers for large groups. "Feeding buzzes" can also be heard on the detector. EINP would be a good location for education events because of the widespread activity of two species of bats.

In conclusion much can be learned about bats in a relatively short time. The QMC mini bat detector is a useful piece of equipment for wide ranging surveys of bats that permits adequate identification of the species of bats and monitoring of their activity. Future sampling of bat activity at Elk Island could show the presence of Silver-haired Bat and Red Bat possibly on migration in May or late August and September.[6] The habitat preferences of each species might also be learned with additional sampling. Finally the Hoary Bat does appear to be a common bat of the aspen parkland as hypothesized by Soper but questioned by Schowalter and Doward.[7] [5]

Acknowledgements

This survey is part of the small mammal inventory of EINP being conducted by Gordon Burns, Canadian Wildlife Service, and the park wardens with funding by Parks Canada. I thank Gordon Burns, Chuck Blyth and the other park wardens for their assistance and enthusiasm during this survey. The comments from Brock Fenton, Ed Telfer and Gordon Burns on an earlier draft are greatly appreciated.

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FURTHER SASKATCHEWAN RACCOON SIGHTINGS

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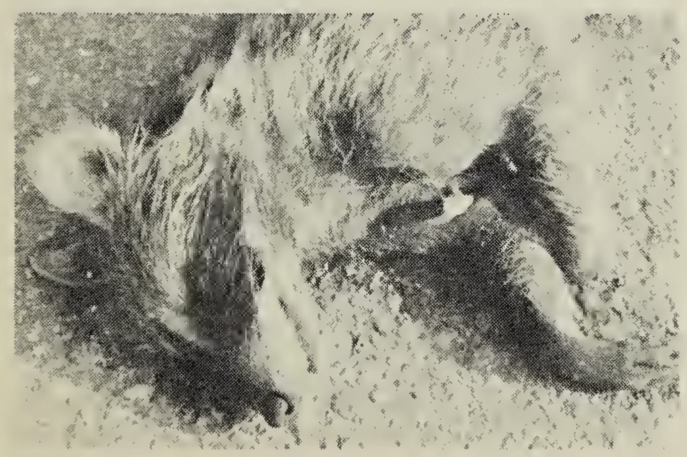
Earlier reports in *Blue Jay* suggest that the Raccoon has been extending its range northward in Saskatchewan in the last 15 years (it is more commonly found in the valleys of the Qu'Appelle and Souris river systems). Harris reported two sightings near Saskatoon (1969).[2] Houston and Houston reported two more records for the Saskatoon area (1971 and 1972); sightings at Leslie and Delisle (1972); as well as more northerly records at Mullingar (1968), Northside (1969-70), and Christopher Lake (1969-70, 1972).[3] Previous records for points farther north are given by Beck for Meadow Lake and by Krivda for Sipanok Channel, near Squaw Rapids (1950).[1] [4]

Filling the gap between sightings at Saskatoon and those at Northside and Christopher Lake, north of Prince Albert, are two observations I made this spring. On 14 May 1983, I came across a freshly killed Raccoon on Highway No. 11 just 9 km southwest of Rosthern (see illustration). It was probably killed the preceding night in its nocturnal wanderings, for it was not there the evening before when I passed.



Road-killed Raccoon near Rosthern. *V. C. Friesen*

A week later, on 22 May 1983, I came across another road-killed Raccoon, this time 5 km north of Petrofka Bridge on Highway No. 12 leading to Blaine Lake.

Raccoons have not previously, to my knowledge, been seen in this area. I discussed my sightings with my uncle, Abe Martens, who farms 5 km southeast of Prince Albert, and he informed me that in March 1975 he found a Raccoon frozen under a pile of hay bales in his yard. He had contemplated skinning it and selling the fur, but consultation with a local fur buyer had convinced him that doing so would not be worth his while.

The extension of the Raccoon's range during these last years in the areas of the Saskatchewan rivers (my sightings, and others, would be included here) may have been furthered by the presence now of crayfish in these waters. This principal food of the Raccoon was not found in the Rosthern area a few decades ago.

Since several of the sightings mentioned in this report were road kills, careful attention by readers to any similar-sized mammals killed on our highways may give still more evidence of the Raccoon's expanding range in our province.

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JUNIOR NATURALISTS

NICOLLE FLATS BRAIN TEASER

Six naturalists were eating lunch beside Nicolle Flats Marsh in Buffalo Pound Provincial Park. While eating they talked about the most interesting birds and animals each had seen that morning. They discovered that each had visited a different trail and each reported a different bird or mammal as their most interesting observation. Using the following 12 clues can you determine where each of the naturalists went and what they saw?

The chart will help you solve this puzzle. Enter all the information from the clues and your deductions using a 0 to indicate the two cannot go together and an x to indicate that they do. Don't forget that when you have a yes all the other spaces in the column or row are no's. Also remember to look for links. If you matched a person to a trail and a trail to a bird, you know the bird goes with the person.

I hope you enjoy this little challenge. While working on it look forward to seeing these trails in person at the 1984 SNHS Summer Meet.

CLUES

1. The Bison was seen from the viewing tower trail.
2. The naturalist who saw the Pintail did not see the Coyote.
3. The Marsh Wren and White-tailed Deer were seen on the same trail. Lorne did not take this trail.
4. Lorne saw a Canada Goose but did not see a Coyote. He did not take the hiking trail.
5. Catherine and Sheena, one of whom saw a Coyote while the other saw a pelican, were on different trails.
6. The Hooded Merganser and the Beaver were along the same trail.
7. Frank walked the dyke trail. He did not see a Marsh Wren or a jack rabbit.
8. Lorne saw the Franklin's Ground Squirrel. He did not visit the Bison trail.
9. The naturalist who walked the Bison trail, who was not Catherine or Sheena, did not see the Marsh Wren or the Coyote.
10. Sheena saw the White Pelican but not the rabbit.
11. The Coyote was on the homestead trail.
12. Ben did not see the Pintail.

— *Paule B. Hjertaas,* 919 Cook Crescent, Regina, Saskatchewan S4X 2L9

Bison. *Fred Lahrman*

	Boardwalk Trail	Dyke Trail	Homestead Trail	Hiking Trail	Viewing Tower Trail	Bison Trail	White-tailed Deer	Bison	Beaver	Franklin's Ground Squirrel	Coyote	Jack Rabbit	Northern Pintail	Hooded Merganser	Marsh Wren	Canada Goose	American White Pelican	Great Blue Heron
Lorne																		
Ben																		
Jim																		
Catherine																		
Sheena																		
Frank																		
Pintail																		
Merganser																		
Marsh Wren																		
Canada Goose																		
White Pelican																		
G. B. Heron																		
Deer																		
Bison																		
Beaver																		
Gr. Squirrel																		
Coyote																		
Jack Rabbit																		

NATURE LIBRARY

THE PRAIRIE WORLD

DAVID COSTELLO, 1980. University of Minnesota Press, Minneapolis, Minnesota, U.S.A. 244 pp. Paper $6.95.
(This is a new edition of the book originally published in 1969.)

David Costello's *The Prairie World* is the product of a life-long fascination with the prairie landscape. His love of the prairies began when he was a boy growing up on a farm in Nebraska and continued into his professional career. His book is a classic study of the prairie biome, packed with information about the ways and wiles of the prairie's flora and fauna.

Intriguing tidbits of natural history fill the pages and stay fresh in the reader's mind: a tenacious clump of coneflowers thriving for 17 consecutive years; a determined hunting wasp standing guard over a spider captured as a "nursery" for her eggs; diligent harvester ants scrupuously sorting and storing seeds in their manicured mounds.

But the book is more than a collection of interesting details. As Costello notes in his introduction, the book is also about relationships - how it all fits together. As the chapters unfold, one is increasingly impressed by the interrelationships of all living things on the prairies - an incredibly diverse and durable landscape.

Costello begins with the prairie's geological pasts and looks back to the original tall grass prairie to illustrate how this landscape was able to renew itself for thousands of years:

> "It may seem paradoxical that disturbances of the prairie by digging animals, floods, fire and even local overgrazing were essential to maintenance of the fully developed prairie itself. Close examination of luxuriant grassland will usually show that here and there all the plans tht become conspicuous during succession actually persist on the prairies at all times. They are able to sustain themselves in suitable micro-habitats made by gopher mounds, badger diggings, anthills, drifted soil, and abandoned mouse runaways .... If there had never been disturbance on the prairie, then competition from all the final-stage plants would have killed the annuals, the invaders, and the intermediate-stage plants, leaving nothing to renew the prairie when catastrophe finally happened. When we see harvester ants, ground squirrels, and other disturbers of the soil, we should thank them for cultivating spots where lesser plants can persist in readiness to renew the land in time of need."

The book, then, gives one an excellent overview of the interlocking ecosystems of the prairie landscape. In addition, successive chapters focus on specific species of mammals, birds, herptiles and insects, emphasizing their ingenious strategies for survival in a demanding environment. Once again the author's personal accounts frequently enliven his descriptions.

In his final chapter, David Costello explores the changing relationship of man to the prairies, leaving the reader to ponder how long the landscape itself will continue to survive:

> "Thus man believes he has met the challenge of the grasslands after one hundred and fifty years of strenuous attempts at settlement. Will the remaining portions of prairie disappear if he can achieve the fullest potential of the contribution it can make to mankind? Will he be able to meet the caprices of nature in the artificial habitat he has established where once the earth thundered with the pounding feet of countless bison and the sky rang with the clarion calls of geese and the whooping of the great cranes? Only time will tell."

Reviewed by *Suzanne Henry*, Waskesiu Lake, Saskatchewan. S0J 2Y0

HERBS IN ONTARIO

CHARLOTTE ERICHSEN-BROWN. 1975, Breezy Creeks Press, Aurora, Ontario. 37 pp. Softcover $2.00.

Herbs in Ontario includes descriptions of 54 different herbs. Each description covers the type of soils preferred, seeding instructions, growing in pots, harvesting instructions and use of the final product. Latin names for each herb are included. There is a bibliography and a list of sources for seeds and plants.

SURVEY OF CANADIAN HERBARIA

BERNARD BOIVIN. 1980. Provancheria No. 10, Memoire de l'Herbier Louis-Marie, Faculté des Sciences de Agriculture et de l'Alimentation, Université Laval, Quebec. 187 pp. Softcover $10.00

This book contains brief descriptions of about 410 Canadian herbaria. Each herbarium description includes acronym (recognized abbreviation for that herbarium), address, history and size of collection, main collectors, publications based on each collection, and sources of information. Besides this there are sections dealing with a history of herbaria surveys, statistical tables, reproduction of a few historical texts and a list of references. An index is included.

PLANTS OF QUETICO AND THE ONTARIO SHIELD

SHAN WALSHE. 1980. University of Toronto Press, Toronto, Ontario. 152 pp. Cloth $25.00; paper $7.95.

Quetico Provincial Park is located in northwestern Ontario along the international boundary between Fort Francis and Thunder Bay. The book begins with a general introduction to the area including a section on "the vegetation of Quetico in a provincial, regional and local context." Following this are 68 pages of color photographs of 194 of the 658 species found in the park. These photographs are arranged by habitat. The sections are 1) lake, marsh and shore 2) floodplains 3) forest 4) bogs and 5) lime rich areas. Following the color section is an annotated checklist of the plants of the park.

The introductory material is very brief, containing very little information on the park. The photographs which supposedly are to assist in identifying the species do not do the job. Many of the pictures are very poor (i.e. too dark—white-flowered pyrola p. 36; out of focus—forest horsetail p. 38; too small or distant —sweet gale p. 6 — these are merely examples of many presenting these problems). Poor color rendition is prevalent throughout. For example the photo of Marsh Bellflower shows a bright blue flower where the flowers are normally white or at most a very faint blue, or the lemon-yellow flowers on Mountain Maple which are normally white.

There are problems with the annotated list as well. The names used for the plants appear to follow Britton and Brown's Illustrated Flora and consequently do not correspond with today's manuals. Also some of the common names have to be unique to this publication and may never be seen elsewhere (i.e. Narrow-branched ground-cedar clubmoss, Fruit of the mud rush and Edward Tuckerman's sedge).

The list does contain considerable comment on medicinal uses of plants. Although this is interesting I question its values in a checklist for a wilderness area. How would it look if the Maidenhair Spleenwork, listed as rare, were to be wiped out by people hoping "to keep hair from falling out and restore it!"

The color photograph section wastes about 50% of the usable space and the poor quality of the pictures are a major drawback in a book where they should be the major attraction. Although the concept of the book is a good one I question the value of this particular publication. — Reviewed by *Wayne C. Harris,* Box 414, Raymore, Saskatchewan. S0A 3J0

ONTARIO BIRDS: Journal of the Ontario Field Ornithologists

Edited by: CHIP and LINDA WESELOH. Volume 1 Number 1, April 1983, 40 pp. Membership $10.00/year which includes newsletter and Ontario Birds. Ontario Field Ornithologists, P.O. Box 1204, Station B, Burlington, Ontario. L7P 3S9

The Ontario Field Ornithologists formed in 1982 and this is the first issue of their journal. Volume 1 Number 1 of *Ontario Birds* contains the following articles: Ontario Bird Records Committee Report for 1982; A record of the Yellow-throated Warbler from Moosonee; Field Identification of Shrikes; A birding site guide to Thickson's Woods, Whitby; A bibliography of ornithology for Oxford County, Ontario; Probable nest construction by Great Horned Owls. In addition there are five notes included, on Boreal Owls feeding on flying squirrels, the first Painted Bunting in Ontario, hummingbird migration, breeding birds of Prince Edward County and fall courtship flight of American Woodcock. There is one book review and a section on Ontario Field Ornithologists' announcements. The overall quality (articles, layout, printing) of *Ontario Birds* is excellent.

One might ask what relevance does an Ontario bird journal have to Saskatchewan birders, but considering the fact that the shrikes of Ontario are exactly the same as those here, that excellent article is certainly applicable here. And do Boreal Owls feed on Flying Squirrels in Saskatchewan? The magazine is excellent, applicable to some extent to Saskatchewan, and recommended! — Reviewed by *Wayne C. Harris*, Box 414, Raymore, Saskatchewan. S0A 3J0

JUST BATS

M. BROCK FENTON. 1983. University of Toronto Press, x + 165 pp. Clothbound $25.00, Paper $10.00.

Bats are the world's second most common and diverse group of mammals (behind rodents). They are also the most misunderstood of mammals, and the mention of bats is enough to make people feel uncomfortable.

Brock Fenton, a professor at Carleton University in Ottawa and an internationally recognized authority on bats, has written an exciting book, one in which his delight in his work shines through. The book is aimed at the general reader and gives a good sense of how bats live, and why they should interest scientists and the public at large.

There are chapters on flight, echolocation, seeing and smelling, diet, energy and survival, roosts, activity, migration and navigation, behaviour, public health, keeping bats out, and conservation. The book's organization struck me as effective: Fenton has broken bat biology into chunks that are smaller than usual, but the scheme emphasizes bats' unique set of specializations, and there is little repetition of information.

Just Bats is particularly strong on basic explanation of bat biology, and does not assume prior knowledge on the reader's part. Scientific jargon has been kept to a minimum. Drawings and photographs are appropriate, are of outstanding quality, and are excellently printed. This book is the first that I have come across that gives such a thorough account of bats' natural history.

But what makes Fenton's book really special is his inclusion of recent advances in knowledge, highlighted by anecdotes from his own research. Not only does this information add insights into science for the general reader, but it also creates an ideal book for the non-specialist scientist.

I am not suprised that Fenton has written a book of this calibre; his fascination with bats goes back a long way. We roomed together as students for two years, and he managed to pass an interest in bats to me. Not so with all who drifted in and out of our batty household - a Britisher who lived with us for a while disliked bats intensely, and got an awful shock one night when he opened a foil package in the freezer, expecting to find kidney for pie. Inside was one of Brock's bats, a little brown destined for further inspection.

I am glad that *Just Bats* is available, and I wholeheartedly recommend it to *Blue Jay* readers — Reviewed by *John E. Storer,* Saskatchewan Museum of Natural History, Regina, Saskatchewan. S4P 3V7

Silver-haired Bat. *W. C. Harris*

LETTERS

THERE ARE NO MAMILLARIA SPECIES IN CANADA

The number of cactus species per unit area is greatest in the tropical parts of the American continents and dwindles to the north. By the time the Cactaceae crossed the Canadian border in their evolutionary travels, the number of species was down to four confirmed and one probable. The paucity of Canadian cacti means that they are not very important to Canadian botanists. Consequently, most botanists are content to refer back to others when discussing cacti. This would not be so serious except that Canadians are out of date when writing about one particular species, the pincushion cactus.

I suspect the trouble began when earlier botanists used outdated references when compiling local floras. When E. H. Moss published his standard book, The Flora of Alberta, he not only used the wrong name but gave it the wrong spelling. The pincushion cactus was listed by him as *Mamillaria vivipara*. The spelling of the generic name has been standardized as *Mammillaria* by specialists in cacti. Although *Mammillaria* is still a valid genus, indeed one of the largest and most studied in the Cactaceae, the species known as *vivipara* has been accepted as a *Coryphantha* for seventy years elsewhere in the world. Only in Canada has the incorrect name persisted, due to botanists copying out of each others' books.

The genus *Coryphantha* is distinguished from *Mammillaria* by the former having grooved tubercles from which flowers arise. *Mammillaria* does not flower from grooved tubercles. This difference is quite obvious and for this reason the pincushion cactus is accepted outside Canada as *Coryphantha vivipara.*

I have been trying for a number of years to get Canadian botanists in line with the rest of the world on this matter. This note was prompted by the appearance of several books and articles recently which continue to use a name obsolete since 1913. — *D. C. Speirs*, Box 6830, Stn. "D", Calgary, Alberta. T2P 2E7.

The following letter is the response of Vernon Harms whose article in the September Blue Jay *prompted Speirs' comments.*

MAMMILARIA VS. CORYPHANTHA

... Personally, I think "he doth protest too much" (i.e. rather too adamantly) on what is only a matter of taxonomic interpretation of how broadly or narrowly to accept genus *Mammillaria*, and not of correctness vs. incorrectness according to the ICBN. (International Code of Botanical Nomenclature).

It is true that many, especially western North American, botanists have recently (the last decade or so) been following the usage of Lyman Benson in his revival of the generic name *Coryphantha* for the "grooved-tubercle" members of *Mammillaria* sensu latus (in the broad sense). Nomenclaturally, there is no question, but that *Mammillaria* has priority *if* one accepts the more inclusive (aggregate) generic concept. But it remains a matter of individual taxonomic interpretation as to whether or not the apical groove on the tubercles is a significant enough character to split away the species with this feature to form a segregant genus to which the name *Coryphantha,* would apply. This remains the sort of open taxonomic question similar to whether or not one should split *Oxycoccus* from *Vaccinium, Machaeranthera* from *Aster, Glandularia* from *Verbena. Conyza* from *Erigeron*, *Moneses* from *Pyrola, Gentianella* from *Gentiana, Moehringia* or *Minuartia* from *Arenaria, Mahonia* from *Berberis,* etc., among many other possible examples. How any of these are accepted is not a matter of "right vs. wrong" usage *per se* (according to the ICBN) but of the degree of taxonomic lumping or splitting (i.e. - conservatism vs. liberalism) accepted, and thus the particular usage by any taxonomist really falls into the realm of taxonomic priviledge (i.e., it can not be legislated or standardized except to some extent by consensus usage).

Speirs' statement that, " . . . the species known as *vivipara,* has been accepted as a *Coryphantha* for seventy years elsewhere in the world" and that " . . . only in Canada has the incorrect (sic!) name persisted . . ." is a gross exaggeration. The generic name, *Coryphantha,* was coined earlier and received some usage along with those of various other generic segregants of *Mammillaria* sensu lat. during the "generic-splitting era 1900-1930, especially as a result of its usage in the

Pincushion Cactus. *S. M. Lamont*

1913 2nd Edition of the Britton and Brown *Illustrated Flora* . . . but there has been no 70-year long or even present-day consensus in applying the generic name, *Coryphantha*, to our pincushion cactus of the Canadian Prairies, as can readily be noted by reference to various major American floras beginning with P.A. Rydberg about 50 years ago, who in his 1932 classic *Flora of the Prairies and Plains of Central North America* treated it as *Neomammillaria vivipara*. Interestingly, even the "Britton and Brown", 3rd edition (1952), did not follow the 2nd edition's instigation of *Coryphantha,* but followed Rydberg in treating it as *Neomammillaria vivipara* instead.

M. L. Fernald, in his 1950 *Gray's Manual 8th Edition,* treated this species as *Mamillaria vivipara*. Almost all North American floras from 1950 to roughly a decade ago (eg., Kearney & Peebles, 1951, *Arizona Flora*; Harrington, 1954, 1964 *Manual of Plants of Colorado*; Munz & Keck, 1968, *A California Flora*; Gleason & Cronquist, 1963, *Manual of the Northern United States and Canada*, the "Britton and Brown" updating; etc.; plus such Canadian floras as Budd & Best, *Plants of the Canadian Prairies*; Scoggan's *Flora of Manitoba*; Moss' *Flora of Alberta*; Breitung's *Saskatchewan Checklist*; Boivin, 1966, *Enumeration des Plantes du Canada*, and 1967, *Flora of Prairie Provinces Part I*; etc.) tended to submerge *Coryphantha* (as well as *Neomammillaria*, etc.) under *Mammillaria*. It is realy only in the last decade or so that *Coryphantha* has been more or less revived and used once again by many botanists, following, I believe, the usage of Lyman Benson. One notes among most recent Canadian publications that H. J. Scoggan (in his 1979 *Flora of Canada, Part IV*) and John Packer (in his 1983 revision of the *Flora of Alberta*) have used the name, *Coryphantha vivipara*. But Looman in his 1979 *Budd's Flora*, used *Mamillaria vivipara*.

But the generic name used depends upon the generic concept accepted (i.e., how inclusively should the genus *Mammillaria* be accepted? and what segregants of *Mammillaria* sensu lat., if any, are meaningful or well-marked enough to be accepted at the generic level?). It is not a matter of "correctness" or "incorrectness" *per se*. Incidently, neither a group of "experts on cacti" nor anyone else can really "standardize" taxonomic interpretations (e.g., broadness of specific or generic concepts) and the resulting different name usages occasioned thereby. All such groups or individuals might do is possibly influence the International Botanic Congresses to conserve and reject particular names contrary to the ordinary rules of priority.

Personally, with regard to the generic name used for our pincushion cactus, I do not consider this a very fundamental or overly important matter. This is especially so if the appropriate synonyms are included in writings to avoid possible confusion as to what taxon is being referred to. Actually, I think it may indeed be most preferrable at this time to follow the seemingly current trend to accept the segregant genus, *Coryphantha*, and call our Saskatchewan and Alberta pincushion cactus, *Coryphantha vivipara*, rather than retaining the species in *Mammillaria* sensu lat. — *Vernon L. Harms*, The W. P. Fraser Herbarium, University of Saskatchewan, Saskatoon, Saskatchewan. S7N 0W0

EDITOR'S NOTE: Incidentally M. L. Fernald's *Gray's Manual of Botany* published in 1950 and printed with corrections in 1970 (corrected by R. C. Rollins) employs the spelling *Mamillaria*, and the second edition of Britton and Brown (*An Illustrated Flora of the Northern United States and Canada*, 1913) which employs the genus *Coryphantha* gives *Mamillaria vivipara* as a synonym, so I do not believe we can credit E. H. Moss with the initial misspelling of the name.

SOCIETY NEWS

Dorothy Fleming (left) receiving Larry Morgotch Award from Sheina Wait. *C. Letkeman*

SNHS AWARDS 1983

The society's awards were presented at the Annual Meeting held at Echo Valley Centre in the Qu'Appelle Valley on 15 October.

The Larry Morgotch Memorial Nature Photography Award this year was presented to Dorothy Fleming of Fort Qu'Appelle for the series of slides shown at the meeting, which included some excellent shots of sunrise and sunset.

The Cliff Shaw Award was presented to Donald Hooper of Somme for his humorous account of his discovery of a rare orchid (Blue Jay, March 1983, 41(1):9).

The Conservation Award this year was presented to a professional for his outstanding leadership in wildlife conservation projects in the Qu'Appelle Valley.

Dennis Sherratt, as supervisor of program delivery with the Wildlife Branch of Parks and Renewable Resources, was responsible for the successful completion of fish and wildlife projects throughout the Valley from Eyebrow Lake in the west to Scissors Creek at the east end of the Qu'Appelle. Unfortunately funding under the Qu'Appelle Agreement ends this year.

1983 SASKATCHEWAN CHRISTMAS BIRD AND MAMMAL COUNTS

Count period is from Saturday, 17 December 1983 to Monday, 2 January 1984, inclusive. Count area should be a circle, 24 km (15 miles) in diameter. This year, count forms will be sent to compilers who submitted counts for Christmas 1982. Anyone else who wishes to send in a count please write for a form to **Mary I. Houston, 863 University Drive, Saskatoon, Saskatchewan. S7N 0J8**.

Reports of counts should be sent to Mary Houston as soon as possible after they are taken (by 10 January 1984 at the very latest).

SNHS NATURE TOURS — 1984

The following nature tours may be organized by the society during 1984. Interested participants should write to Stan Shadick, 3F-1800 Main St., Saskatoon, Saskatchewan. S7H 4B3. Tour prices (where listed) cover all costs except meals and train/air fare.

Cypress Hills, Sask. (Sage Grouse)
  April 20-22
Point Pelee National Park, Ont.
  May 7-13 ($695)
Churchill, Man. June 22-27 ($495)
Vancouver, B.C. CNF Conference
  mid-July
Sach's Harbour/Inuvik, N.W.T. July
Cambridge Bay, N.W.T. July
Saskatoon, Sask. (Whooping Cranes)
  October 6

1984 CALENDARS & WEEKLY DIARIES 1984

CANADIAN NATURE 1984 *Wall Calendar*, 24 pp., 13¼ × 11, $8.95 + 45¢ Sask. Tax. SNHS members pay $8.05 and Sask. residents add 40¢ tax; 12 sumptuous 4-color photos of animals, birds, flowers, landscapes by some of Canada's foremost photographers. Camera and film details included with each photograph which is a useful plus for camera fans.

CANADIAN WILDFLOWERS 1984 *Weekly Engagement Diary*, 128 pp., 8 × 5, prices as per calendar, 53 4-col. photos, 5-col. cover and presentation box; notes on edible plants, text by Mary Ferguson. This will delight the fortunate owner all year.

CHRISTMAS CARDS

BOREAL CHICKADEE in full colour by Stan Shadick, 6″ × 4½″, pkt. of 10 $4.00 net, with envelopes; Sask. residents add 20¢ tax. A delightful study!

FRITILLARY ON ARNICA in full colour by Jim Jowsey, same details as above. The coppery butterfly with fully spread wings resting on the golden arnica blossoms presents a scene of gaiety in keeping with the joyful Season!

PLEASE ORDER YOUR CALENDARS EARLY AS THESE POPULAR ITEMS QUICKLY GO OUT OF PRINT! Order from **THE BLUE JAY BOOKSHOP**, P.O. Box 1121, Regina, Saskatchewan. S4P 3B4

MESSAGE FROM THE PRESIDENT — STAN SHADICK

As your new president, I wish to thank the membership for their confidence in electing me to this position. I would like to discuss here some of the activities of our society.

The Saskatchewan Natural History Society has always been a leading advocate for conservation of natural areas. When I attended my first annual meeting of the society in 1962, a resolution was passed calling for the establishment of a Grasslands National Park. Since that time some progress has been made towards that goal. Unfortunately this past year the seismic exploration program that the province requires before permitting Parks Canada to purchase lands for the park was not carried forward. We must urge the governments involved to act quickly to complete arrangements for the park.

At the 1983 summer meeting many members visited our sanctuary at the mouth of Big Gully Creek, northeast of Maidstone. In the past our society has paid the annual lease and taxes on this property and the provincial government has now agreed to make the area a permanent wildlife sanctuary providing our society can raise $10,000 which amounts to about one sixth of the purchase price.

Another SNHS conservation project has been to raise $5000 annually towards Saskatchewan's Heritage Marshes Program. This program is a joint project between our society, the provincial government, Ducks Unlimited, the Saskatchewan Wildlife Federation and Nature Conservancy of Canada. In October 1983, Ponass Lake near Rose Valley was established as the first protected marsh under this program.

To make conservation projects a success, we depend on the financial generosity of our members. In effect we must demonstrate that not only hunters, but birdwatchers and botanists also care about protecting natural areas. I would hope that you will support our conservation projects by sending a tax deductible donation to the Saskatchewan Natural History Society, Box 1784, Saskatoon. S7K 3S1.

Finally when you are renewing your Saskatchewan Natural History Society membership, please consider becoming a Sustaining or Patron member. The society needs additional revenue from these members to cover the increased costs of publishing the Blue Jay. Perhaps you might also send a Blue Jay gift subscription to a fellow nature enthusiast for Christmas.

SASKATCHEWAN NATURAL HISTORY SOCIETY

Balance Sheet as at September 30, 1983

ASSETS				
Cash on Hand — Bookshop				$ 40.00
Cash in Bank — Current Account SNHS			$ 105.98	
— Savings Account SNHS			12,048.96	
— Current Account - Bookshop			3,351.83	15,506.77
Investments — Regular Term Certificates			19,624.04	
— Life Membership Trust Investments			4,245.00	23,869.04
Stock on Hand — Bookshop				7,063.54
Interest Receivable				1,270.44
Deposits with Post Office				50.10
Accounts Receivable — Bookshop ($203.54 less ppd. orders ($98.10)				105.44
TOTAL ASSETS				$47,905.33
LIABILITIES				
Deposits on Whooping Crane Trips			$ 195.00	
Due for Big Gully Lease				$ 1,200.00
Education Tax Payable — Bookshop			59.24	
PWIC — Webb — Payable to Trust			82.25	
Bookshop Hon. Due — Open Bal.		$3,159.00		
— 1983 Owing		1,860.46		
		5,019.46		
Less Paid in 1983		3,459.00	1,560.46	
TOTAL LIABILITIES				$ 3,096.95
TRUST FUNDS				
Conserv. Fd. — Bal. Sept. 30/82		1,194.75		
— Plus Donations		768.00		
		1,962.75		
Less — Buteo Platforms	$ 768.00			
— Osprey Platforms	35.49			
— Melfort Dam Pro.	187.48			
— Big Gully Tr. Cst.	356.18	1,347.15	615.60	
Heritage Marshes - Bal. Sept. 30/82		2,313.61		
Plus Donations & Lottery		5,919.00		
		8,232.61		
Less Expenses	27.45			
Paid to Sask. Wildlife Federation	5,000.00	5,027.45	3,205.16	
Mouth of Big Gully - Taxes	276.18			
— Lease	1,200.00	1,476.18		
Less Donations	1,120.00			
Tnsfrd. from Cons. Fd.	356.18	1,476.18	—	
Rain Forest - Bal. @ Sept. 30/82		205.00		
Plus Donations		195.00		
		400.00		
Less Pd. to Organ. for Trop. Std.		400.00	—	
NCC Ecological Reserve			1,050.00	
Trust Fund for Special Publications			2,050.00	
Life Membership Trust Fund			4,245.00	
CWS Trust Fund re PWIC — Webb		1,023.00		12,188.76
NET WORTH				
Opening Balance Sept. 30/82			32,520.16	
Less Prior Year's Net Adjustment			284.60	
			32,235.56	
Plus Net Gain			384.06	32,619.62
				$47,905.33

MEMBERSHIP APPLICATION

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Patron ($50.00) . . . . ☐
Life ($500.00) . . . . ☐

Regular—outside Canada ($15.00) ☐
Senior Citizen ($10.00) . . . . ☐
To save costly postage, an Income Tax receipt for Sustaining, Patron, Life Memberships, and donations will only be sent if you check here . . . . ☐

I am a new member for 198____. This is my renewal for 198____.

I wish to make a donation to: Conservation Fund $ . . . . ☐Check above
Heritage Marshes Fund $ . . . . ☐if receipt
Other $ . . . . ☐required.

- * **Life Membership** is payable at one time, or over 5 years, or any shorter period agreed.
- * Any amount in excess of the regular membership rate of $12.00 is viewed as a *donation* for Income Tax purposes, and a receipt for the excess amount will be mailed to you if you check in the space above (minimum $10.00).
- * **Bulk subscriptions** to schools and clubs is $12.00 for the first subscription, and $10.00 for each additional subscription to the same address (minimum of 5 subscriptions).
- * Send application to: **SNHS Treasurer**
  Box 1784, Saskatoon, Saskatchewan. S7K 3S1
  All cheques and money orders should be payable to SNHS.

- * Do you know of any person interested in natural history and conservation who does not receive the *Blue Jay*? If you do, please list name and address on this page, and we will send a sample *Blue Jay* and an invitation to join our Society.

Please note the change that will appear on your address label. The first line will give the date of expiry of your membership. There will be no invoice sent to remind you.

YOUR SOCIETY'S SPECIAL PUBLICATIONS

Why not include with your renewal an order for some of these publications for yourself or for others? While some titles are out of print, here's a list of those still available, their low prices due to grants, donations, etc.

Publication # 4	Blue Jay Index 1942-60 — Deutscher	$2.00	__	____
Publication # 5	Birds of Lake Athabasca — Nero	2.50	__	____
Publication # 6	Birds of Northeastern Saskatchewan — Nero	2.00	__	____
Publication # 7	Birds of Moose Mountain — Nero & Lein	2.00	__	____
Publication # 8	Blue Jay Index 1961-69 — O'Neil	3.00	__	____
Publication # 9	Birds of the Rosetown-Biggar District — Renaud & Renaud	4.00	__	____
Publication #11	Blue Jay Index 1970-78 — Bocking	5.00	__	____
Publication #12	Birds of Regina — Belcher	5.00	__	____
Publication #13	Birds of the Qu'Appelle — Callin	7.00	__	____
Publication #14	Saskatchewan Cougar – Elusive Cat — White	5.00	__	____
	Birds of the Elbow — Roy	.50	__	____
		Total		____

These publications can be ordered from the Blue Jay Bookshop, Box 1121, Regina, S4P 3B4, but please don't hesitate to send an order along with your membership renewal to Box 1784, Saskatoon, S7K 3S1.